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PEDIATRICS

A SEMI-MONTHLY JOURNAL

DEVOTED TO THE STUDY OF

Disease in Infants and Children.

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PEDIATRICS

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ORIGINAL ARTICLES.

PERTUSSIS.

By Thomas M. Dolan, M.D., F.R.C.S., Ed.
Editor of the Scalpel.

It is now eight years since my article on Pertussis appeared in Keating's Cyclopedia of the Diseases of Children, and since that time I am sorry to say that very little light has been thrown on the pathology of the disease, though as regards treatment we have numerous new remedies, some of which are certainly an improvement on our old ones. I shall now pass in review all that we have been able to find out from our own experience or from that of others working in the same field during the past eight years, but I must first repeat that whooping-cough may be defined as a communicable disease, depending on a specific poison prevailing epidemically and sporadically. It is characterized by fever, malaise, irritation of the respiratory tract, catarrh, and subsequently by a hard, dry, convulsive, paroxysmal cough. It attacks both sexes and all ages, but especially children, rarely occurring more than once. Usually it runs a course varying from three weeks to three months. It may be complicated with other lesions, as ulceration of the *frænum linguæ*, enlargement of the tracheo-bronchial glands, capillary bronchitis, lobular collapse, emphysema, various hemorrhages, paralysis, convulsions, jaundice, catarrhal pneumonia, tubercular meningitis, and other diseases of children.

Drs. Cohn and Neumann[1] examined the expectoration in 24 cases of whooping-cough from one to ten years of age. At the end of a spasm the sputum was placed in a Petri glass, thoroughly washed with distilled water and a small portion dried and stained with carbolic methylene blue. Under the microscope, diplococci and short chains of small cocci were seen, but the authors do not assume that these are positively the specific germs of the disease.

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[1] *Arch. für Kinderheilkunde*, Stuttgart. Vol., I p. 24.

Drs. Wells and Caire[2] believe the pertussis microbe fabricates some virus, which, taken into the circulation, acts as an irritant poison to the nervous tissues, especially the respiratory and vagal centers, rendering them far more excitable than normal. They regard the catarrhal stage as the period of microbic activity, and the whooping one as due to the after effects of a poison generated by the microbe. This affords, if true, a complete reconciliation between the vacillary and the neurotic theories of the disease.

The practice of these authors is to give doses of hydrochlorate of cocaine in water, based on the standard of a one grain dose for an adult, three or four times a day, by the mouth. No marked evil effects were seen from the use of cocaine, and the average duration of the cases was about three weeks.

According to Unruh[3] the malady is to be considered as an infectious catarrh of the respiratory organs, caused by a specific germ leading to infection, and swelling of the lymphatic glands of the respiratory tract, accompanied by and causing severe reflex symptoms, viz.: the attacks. For the relief of this condition he advises the insufflation of quinine eight or ten grains once a day into the nose and pharynx accompanied or not by the internal administrations of quinine.

In order to test the question of the bacterial origin of whooping-cough, Raubitschek[4] treated several cases with a solution of corrosive sublimate, using a strength of 1 in 1,000, applied to the tonsils, uvula, epiglottis and adjacent membrane either with a brush or a plug of cotton wool. Severe cases were treated every day, milder ones every other day. The condition was as a rule improved on the second, or at the latest the third day. Treating a child in the convulsive stage, it would be well after four or five applications.

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[2] *Lancet*, Vol. I, p. 23, 1893.

[3] *Jahrbuch für Kinderheilkunde*, Leipsig, 1896.

[4] *La Semaine Medical*, April 26, 1894.

The latest study is that of Kurloff[5] on fresh and unstained sputum. Kurloff discovered an ameba characterized by a finely granular protoplasm and great capability of movement, and he believed this to be the infecting agent of the disease. This organism as it grows attains considerable size, bright large granular spores appearing on its body, arranging themselves in concentric layers. When the cell is ruptured the spores escape, increase in size until finally and, partly within the body of the patient, young amebæ are thus set free by the rupture of the capsule.

These young amebæ are provided with cilia, and are capable of active movement. Besides these there were other bacteria present in the sputum; however, no special significance was attached to them. However, the importance of these with regard to the secondary phenomena and complications of the disease cannot be denied.

As I have said before, though, we do not find any rough pathognomonic change in simple uncomplicated whooping-cough, yet it cannot go on long without leaving some impression on various parts of the frame.

There is one important lesion, viz.: the imperfect aeration of the blood and disturbance of the circulation. In very severe paroxysms the incessant, harassing cough, the vomiting, the very concussion produced by the above, must in some way alter the texture of the mucous lining of the throat, bronchia, or bowels, or the structure of the lung, the heart or the brain, and the meninges.

We have also to fear from whooping-cough, pulmonary collapse. In whooping-cough the lung is generally more or less dense and contracted, but collapse often follows as the result of bronchitis at the same time. Air is expelled, but none is taken in, the consequence being the air cells collapse.

An expedient for cutting short the paroxysms of whooping-cough is described by Nægely. It consists in seizing the two greater cornua of the hyoid bone with both thumbs and holding the bone, together with the larynx, up from sixty to ninety seconds. The author does not attempt to explain the modus operandi of the relief obtained, but thinks it calls an inhibitory reflex into play.

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[5] *Central, für Bakteriology*, Vol. XIX, 1896.

Much can be done, if taken at the beginning of the disease, in the way of shortening its duration, and also to lessen the paroxysms, and we shall now pass in review all the modern remedies put forth for the alleviation of this malady.

Dr. Rothschild[6] used tussal in an epidemic of pertussis. He states that in patients who were treated with tussal from the outset, and took their doses regularly, the duration of the disease was notably shortened and its whole course was much milder. In a few of them it lasted not longer than a fortnight.

Dr. Marfan[7] believes that bromoform is still the best specific for pertussis. He employs the following formula:

Bromoform....................	48	drops.
Oil of sweet almonds..........	20	grammes.
Gum tragant..................	2	"
Gum Arabic...................	4	"
Water to make................	120	c.c.

Mix first the bromoform and oil, and shake vigorously, then add the other ingredients. A coffee spoonful contains two drops of bromoform. For a child of five years of age he prescribes as a daily dose four drops for each year of the age. From five to ten years the beginning dose is twenty drops daily. These doses should be gradually increased by two to four drops a day until they are doubled. Under six months the initial dose should be two to three drops; from six months to one year from three to four drops.

I had lately under my care some very severe cases of whooping-cough, one especially in a girl about eleven years old. The paroxysms were so severe that people round her thought she must die, as it seemed impossible for her to get her breath again. I found the greatest possible use in bromide of potassium given in small and frequent doses.

Variot,[8] I find, recommends much the same formula. I have myself used it with splendid results, as it shortens the spasms and takes away the dread of the approaching cough.

The little patient, when feeling as though the cough was coming on, will invariably run for its dose of medicine.

Potass-Bromide..............	2	drachms
Tinct. Valerian..............	2	fluid drachms
Aquæ........................	9½	fluid ounces

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[6] *Deut. Med. Woch.*, Nov., 1896.

[7] *Rev. Mens. des Mal de l'Enfant*, April, 1893.

[8] *Journal de Chirurgie et de Therapeutique Enfantile*, April, 1894.

M Sig.—To an infant, three fluid drachms, to children two to three years, six fluid drachms; to children five to ten years, three fluid ounces daily.

There is also in many bad cases evidence of heart strain, both during the paroxysms and in the intervals. Antipyrin and digitalis have been advised by Koplik and Knight.[9] Antipyrin should be given in doses of one grain for each year of age, the maximum being five grains. Digitalis, one minim of the tincture for each year, the maximum dose being four minims.

I have also found great advantage in burning cones of carbolic acid, thymol, eucalyptol, to clear the atmosphere.

Koroleff[10] used naphthalin vapor in nine cases; in four the cough vanished in three days, in the remaining five cases no results were obtained.

As well as the bromide of potassium, I strongly recommend the succus belladonna in large doses to relieve the irritability of the lungs and to assist expectoration.

Venetianer, in his lectures at Vienna[11] on the present aspects of whooping-cough, commends his treatment by historical references to inhalation. This, he says, is the rational form of treatment in the catarrhal form of whooping-cough, whose advocates believe that the disease is a local one, and confined to the throat; hence the dictum, *Sublata causa tollitur effectus.*

This form of administering a local medicament has the advantage of a wide diffusion. Hirschfeld was among the first on the continent to administer carbolic acid in the form of a 1.2 per cent. lotion in a finely divided form of spray to the mucous membrane of the throat. Monti succeeded him with a large record of successful cures.

Neumann substituted benzine, which was applied in the form of vapor after mixing with boiling water. He also applied it on a handkerchief, and held to the nose; this was at one time esteemed a sovereign remedy against the spasmodic attack. Chloroform was administered in the same manner, but found to be of little value in the cure of the disease.

Rehfeld rather discourages this belief, and published several cases to prove his contention, among which he relates one of a boy æt. five, who suffered from a severe spasmodic cough for six months, without the slightest relief from any other drug. One day the boy fell and broke his thigh bone. On administering the chloroform, while replacing the fragments, the child appears to have breathed deeply, and quickly passed under its influence, which also cured the cough, as the child was never heard to make another whoop.

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[9] Koplik, *Archives of Ped.*, 1893.
Knight, *New York Med. Jour.*, Sept., 1894.

[10] *Med. Oborjrenije*, Warsaw, Nov. 21, 1896.

[11] *Med. Press*, Aug. 18, 1897.

Mohn, of Christiania, seems to have been the first to introduce sulphur vapor inhalations, which method was asserted to cure the disease in eight to fourteen days. His plan of treatment was twenty-five grammes of sulphur burnt in a room containing steam, and the vapor was allowed to remain in it five or six hours, with the doors and windows closed. After this the doors were opened five minutes, when the child was carried into the room and allowed to sleep there over the night. Two or three times of this treatment was sufficient to cure this disease.

Labbe and Oudin introduced ozone, which seems to have met with considerable success at first. A tenth of a milligramme of ozone was mixed with a liter of air, which was administered in ten or fifteen minutes several times a day before food. In twenty-two cases treated all were greatly improved.

Briz, of Madrid, introduced hydrofluoric acid, which seems to have acted with great intensity and much success, three or five inhalations being sufficient. Every second day twenty grammes of the acid were mixed with two liters of water.

Chavernac operated with naphthalin vapor in steam, and records good results. Kreismann combined antipyrin with the naphthalin. He also prescribed the following to be mixed with the naphthalin:

℞	Antipyrini, grammes	3.0
	Resorcini, grammes	1.0
	Aq. Distillati, grammes	100.0
	Aquæ menthi pip, grammes	10.0

Sig.—Two teaspoonfuls to be used in the vapor.

With the same object of disinfecting the throat, short, frequent visits to gas works were recommended, where the products of coal distillation were reputed to be effectual in checking the infectious nature of the disease, but the irritation produced in the lungs rather tended to irritate than relieve. Salicylate acid, turpentine, quinine, resorcin, etc., have all been recommended in turn.

The latest inhalation is that of ligno sulphite, strongly recommended by Professor Monti, in pulmonary tuberculous diseases. The children are subjected one hour a day to the inhalation, but at present it seems to have little effect in checking the whooping.

In reviewing the inhalation treatment, very little benefit seems to be obtained when applied singly, but, as a rule, other drugs are given internally, to the effect of which success must be looked for.

Painting the mucous membrane of the throat seems to have met with more success than inhalations. Raubitschek, in 1893, commenced painting with a sublimate lotion around the epiglottis, uvula, tonsils and palate (1 in 1,000). This was the treatment followed by Gentile in the last epidemic of whooping-cough in Naples, which Prof. Fede avowed was effectual. In his recommendation he says that painting the mucous membrane of the throat with a lotion of sublimate (1 in 1,000) never fails to arrest the disease, pertussis disappearing almost after the first application.

From this resume of the different remedies, inhalations, etc., our readers will, we feel sure, be able to cope in some way with the disease, especially if they can get hold of it at an early stage. The most curious thing is that so few children have whooping-cough exactly alike; some whoop at every cough, others may only give one whoop in the whole course of the disease; yet that child may give it to another who may have it as badly as possible.

I have in my other paper given all details as to the management of the different stages, and this treatment I should suggest be continued the same, as it will generally be sufficient to guide the little patient safely through pertussis when the case is simple.

I think in this short resume we are now brought up to date with all that is in any way known about pertussis. We must only hope that as science advances we may be able to find some immediate cure for this distressing malady.

TRAUMATIC ANGIOMA OF THE NASAL MUCOUS MEMBRANE.

By GEO. H. GODSON, M.D.,
New York.

THE following case, which, considering the rapidity of its development and absorption, might be called traumatic angioma of the nasal mucous membrane, is a rare affection and may be of interest.

In August, 1897, a girl six years old was brought to me by her mother to be treated for epistaxis, which the child had at frequent intervals during the past week. Inquiry as to the cause of the condition revealed the fact that the child, while playing in the street, had fallen on her face against a stone. She had a profuse nose bleed, and, although easily arrested at the time, it was prone to bleed again with slight cause. The patient was very anemic, with an anxious expression due partly to fright, as she was unwilling to be examined––and partly to loss of blood. It was plain to note the right nostril bulging from within outward. The temperature of the body was normal. The naris of that side was filled with a red mass covered with what seemed to be a network of connective tissue perforated with red and white holes through which serum was exuding. The size of the growth, as seen at the naris, was about as large as a white bean, but as the deformity extended to regions of the upper lateral cartilage of that side it was thought that either the neoplasm was considerably larger or accumulation of blood clots above the growth was accountable for most of the deformity. A small piece of cotton saturated with four per cent. solution of cocaine was held against the lower end of the mass, and the growth, although not retracted by the application, could be felt with the end of a probe as a dense and slightly movable mass. The patient being exceedingly irritable and the nose painful to the touch, the examination was unsatisfactory.

Remembering that sulphate of quinine was recommended preparatory to nasal operations to limit probable hemorrhage, I prescribed this drug in two grain doses, to be taken at bed time for a week or ten days. In the mean time the patient reported every second day for local application. She was seen three times during the ten days, and when last seen, on the seventh day, the mass was smaller, had bled only twice. The child was restless and the mother anxious, so it was decided to remove the mass on the tenth day if no further improvement should be seen. I advised her to continue the treatment. On the tenth day the mother reported that the child was all right, and there was no need for operation. Up to December, 1897, the patient has had no hemorrhage from the nose and has no sign of obstruction.

The previous history of this patient, as known to me, is that she was under treatment from October, 1895, till April, 1896, for purulent otitis media of two years' standing, and bronchitis which was easily aggravated by exposure to cold. She was treated on several occasions for epistaxis, but no deformity in the nasal cavity was present; the epistaxis became less frequent under treatment with general tonics. From April, 1896, till the time of the accident she enjoyed good health. Although of quite healthy parents the child is of delicate frame. Her father, however, has been subject to hay fever for many years and has bleeding from the nose. Aside from this there is nothing of particular interest in the history of the case.

Being unable to find a similar case reported, I thought it might be of interest as an uncommon affection, both in its etiology and its prognosis.

301 West 114th street.

ANTISEPTIC TREATMENT OF ACUTE OTITIS MEDIA.

By Arthur H. Cheatle, F.R.C.S.,

Surgeon Royal Ear Hospital and Senior Aural Clinical Assistant King's College Hospital.

THE introduction of antiseptics has entirely altered the treatment of acute abscesses in all parts of the body; abscesses are opened and drained or even sewn up immediately after opening, and although micro-organisms are present in the first instance, healing occurs without further purulent discharge, thus indicating the extreme importance of preventing infection from without.

The same method of treatment is applicable to acute median otitis.

In cases of fracture of the base of the skull involving the temporal bone, if the meatus is thoroughly purified and an antiseptic dressing applied, no septic infection occurs, showing that antiseptics can be freely and successfully used in the middle ear and meatus; the cilia lining the Eustachian tube and the sterilizing function of the nasal passages (St. Clair and Hewlett) preventing infection from the naso-pharynx. If we wish to prevent further infection of any discharge coming from the middle ear, or to prevent infection when operating on the meatus or intact middle ear, the purification of the meatus is all important.

If an ear is looked into without introducing a speculum or displacing the auricle, the cartilaginous meatus is seen to be lined with fine hairs, which, growing on the projections of the meatus at different levels, completely obstruct the lumen, serving, together with the curves of the meatus and the cerumen, to arrest minute foreign particles. This cartilaginous portion of the meatus is found to be teeming with micro-organisms, and is therefore the part which necessitates the most careful purification. One of the great objects in the treatment of acute otitis should be to prevent further infection from the meatus, even if pus is present in the middle ear; but in many cases in which the drum is markedly inflamed and bulging, sero sanguineous fluid alone escapes on incision.

The first thing to be done, then, is to purify the auricle and meatus; to introduce a light plug into the meatus and apply a dressing and bandage to the auricle; then, if rupture occurs, or an incision has to be made, meatal infection cannot occur, while if rupture does not take place, or an incision is not necessary, the inflammation being cut short by the usual measures, which are not interfered with, the dressing serves a most useful purpose in aiding to produce functional rest, a point not sufficiently insisted upon in the treatment of any acute aural trouble. It is wise to also plug the sound ear with cotton wool, and to place the patient in absolute quiet, forbidding all conversation, communication being carried on by means of a slate.

When discharge occurs after rupture or incision, the dressing is taken out and reapplied as often as is found necessary, gentle mopping with a soft wool mop, moistened in 1-40 carbolic, or gentle syringing with the same solution, fairly hot, being used to clear the meatus.

Any cause in the naso-pharynx, etc., must, of course, be treated at the same time. To purify the auricle and meatus I use 1-20 carbolic or *strong mixture* (a solution of 1-20 in which is $\frac{1}{500}$ part of perchloride of mercury); the auricle and cartilaginous meatus being firmly rubbed, the latter with a mop or forceps; an instillation for a quarter of an hour being used for the deep meatus; all foreign matter being first gently syringed out with warm 1-40 solution.

The dressing that serves well is double cyanide gauze, used in single layers and thoroughly wrung out in 1-40, to dissolve out the irritating soluble cyanides.

It may be that less irritating solutions may suffice, but little trouble is caused by the strong solutions beyond desquamation. Carbolic has an anesthetic action and is particularly useful in the meatus by reason of its power of penetrating greasy substances. Care, of course, must be used in children. In whatever way performed this antiseptic treatment gives excellent results, and is undoubtedly the true surgical method of treating this disease.

EDITORIAL.

THANKS to the attention of the profession, we have successfully passed that critical period in the life of every individual, the second summer, and are now ready to enter upon a career of wider usefulness. The beginning of our third year finds us with a subscription list of nearly ten thousand, which clearly indicates that we found a place to fill. We are not weary of well doing, but would gladly shed our light still further. In view of our past prosperity, we have felt justified in moving into larger quarters, and in establishing our own printing plant. This mere statement should be an indication of increased activity.

A few words here in regard to the new Pediatrics Laboratory. This is a private laboratory, not connected with any institution, and is designed to afford to any one interested in the scientific side of medicine, the opportunity of doing research work along any line he may choose. In addition to this, however, it was recognized that many men who are just as much interested in the scientific advance in medicine are deterred, by lack of time or other reason, from actively engaging in such researches, and for these the laboratory proposes to furnish, in addition to instruments and reagents, the necessary hands, time and special training. The success of the laboratory in the few months of its existence indicates that there was a definite place for such an enterprise. We hope that the field of our activity will be so widened that next January we shall wish a Happy New Year to twice as many friends as receive our greeting to-day.

EDITORIAL COMMENTS.

Training of Deaf Children in Different Parts of the World.

No feature is more typical of the trend of the present age, than the almost universal acceptation of the doctrine, that the care of those children afflicted in mind or body, who are either orphans or whose parents are too poor to afford them the attention and training which their condition requires, should fall upon the State. The State acts "in loco parentis" and its responsibility is freely recognized in all civilized countries, as regards the mentally deficient, the deaf and the blind. Such has not always been the case. There was a time and not far distant when the treatment of deaf mutes was a blot on our civilization and their position was a pitiable one. They were, for the most part, regarded as useless burdens, and no especial efforts were made to better their lot. Among some of the early nations the problem of dealing with this class was solved in a very simple manner. If an infant born deaf arrived at the age of three years, without hearing, an end was put to its life. Although this barbarous custom has long been abolished, it is only within comparatively recent years that the difficult question of educating and training the deaf has been earnestly grappled with, and that an intelligent and rational system has been evolved. Unqualified success has attended the labors of these reformers, and under the improved arrangements of the present day, deaf children not only receive ordinary elementary education, but also manual instruction which enables them, in many instances, to earn their own living and to become more or less useful members of society. The methods of instruction used with the deaf may be divided into two great groups, one of which embraces the teaching by speech and other vernacular means, the other by the sign language and any or all other means. Of course these two systems can be again subdivided into various branches, but any attempt to classify them in detail, owing to the lack of clearly stated uniform and generally accepted definitions, would prove misleading. In the United States the sign language is most in vogue, while in Europe, on the other hand, teaching by speech and other vernacular means is more widely practiced. The Volta Bureau, "for the increase and diffusion of knowledge relating to the deaf," has recently issued a pamphlet containing statistics and useful information in regard to the deaf in various parts of the world. From this it appears that the total number of schools for the deaf in the world is 546. Of this number Europe possesses 420, North and South America 109, and Africa, Asia and Australia 17. In Europe the boarding schools number 152, the day schools 130, boarding and day 74, and unclassified 64. In North and South America there are 62 boarding schools, 31 day schools, 12 boarding and day, and unclassified 4. In Africa, Asia and Australia there are 7 boarding schools, 2 day schools, 4 boarding and day, and unclassified 4. In Europe the number of pupils in boarding schools is 9,285, in day schools 4,840, in boarding and day 5,107, unclassified 3,040. In North and South America the number of pupils in boarding schools is 8,366, in day schools 722, in boarding and day 1,044, unclassified 69.

The fact is worthy of note, that in the number of pupils Germany easily heads the European list, with England second, France third, while Russia with her immense population possesses under 1,000 pupils in her deaf schools. The United States has considerably more deaf children undergoing instruction than any country in the world. In Europe, out of a total of 22,274 deaf, no less than 18,176 are taught by speech. In North and South America, out of a total of 10,201 deaf, 6,814 are taught by sign language.

The statement is made in the Volta Bureau circular that few governments exact well defined statutory qualifications which applicants must possess in order to secure an appointment in schools for the deaf. In Germany a searching examination must be undergone before a would-be teacher's name can be entered on the vacancy register. A similar practice prevails in Sweden and other Scandinavian countries. No mandatory laws exist in England, France or Austria. Of the United States the only ones which exact by law statutory requirements are Wisconsin and Illinois. This is a fault in the system which certainly should be corrected as quickly as possible.

That the teachers of the deaf should be thoroughly trained and proficients in their work would appear to be a prime necessity. Regular government inspectors of schools for the deaf are provided for by law in the German Empire, in Russia and the Scandinavian countries, in Great Britain, Canada, and recently in this country by the State of New York.

Mr. Hall Caine's Definition of a Still-born Child.

Mr. Hall Caine's latest work, the "Christian," has been sharply criticized from all points of view. Lay and medical journals are of one mind in showing up its many errors. The statements contained in the book on medical subjects are almost without exception false and misleading. The pictures of hospital life are plainly drawn from the imagination and not from practical knowledge. Among the many displays of ignorance on medical matters is the definition of a still born child as one that has "breathed but never cried." This bold assertion has attracted much attention in medical circles and has been used as the text for several sharp attacks.

Dr. Bedford Brown, in the *Therapeutic Gazette*, distinguishes between a dead born and still born child thus: "In both conditions the vital functions are in a state of absolute suspension, in the dead born permanently, in the other temporarily. In the still-born infant the cardiac sounds are absent and there is an entire suspension of the pulse, the muscles are perfectly limp and relaxed the function of respiration is absolutely suspended, yet the vital spark is retained and capable of being restored to vigorous life. The best test to distinguish between the still born and dead born is the temperature. In the former the rectal temperature may be two or three degrees below normal, in the latter ten or fifteen will be registered." It seems a pity, as well as decidedly unfair to the medical profession, that when a writer elects to drag in technicalities—especially one whose books are widely read—he should not first satisfy himself that his statements are correct. No harm has, however, been done by Mr. Hall Caine's mistake as to what is meant by the term still born; it is but one of many errors, but his assertions in regard to the conduct of a large hospital are deserving of the most severe censure. He has wilfully attempted to cast a stone at both the medical and nursing professions.

Disease in Pencils and Penholders.

Germs of infection are lurking in the most innocent looking substances. An alarmist article has recently been written entitled "money, the chariot of disease," in which the probable danger of contracting and transmitting infectious complaints by means of money is pointed out. The progress of a coin is traced through a part of its career, and its disease spreading course is sketched in a realistic manner. Perhaps the article in question is rather overdrawn and depicts an improbable state of affairs, but there is one point mentioned in it which is worthy of notice. The habit common to some persons, of holding coins in the mouth, is referred to. This custom is unfortunately not restricted to money, but is followed in the case of various articles. A daily journal gives the following occount of an enquiry lately instituted in Boston: "An investigation of the spread of diphtheria among the pupils of the public schools of this city has led to the conclusion that it is largely caused by the use of pencils and penholders. Health Commissioner McShane sent a communication to the school board recommending a different system than the one in vogue of collecting the pens and pencils at the close of school each day and redistributing them next day. The commissioner says the children place the pencils in their mouth, and disease is thus communicated from child to child by the indiscriminate use of pens and pencils. He has recommended that each child use the same pen and pencil every day, and that all the penholders and pencils be sterilized."

The Progress of Russia in Medical Science.—Vital Statistics and Infantile Mortality in St. Petersburg.

The Medical Congress at Moscow, if it effected nothing else, at least has opened the eyes of other nations to the startling advance that has been made in Russia in respect to medical science. Many otherwise well informed persons were imbued with the belief that Russia was far behind other nations in all relating to modern medicine. However, those who were fortunate enough to visit Moscow and St. Petersburg last summer have been compelled to change their views and to acknowledge that Russia is quite up to date. The hospital accommodation and the opportunity generally for carrying on scientific research in these cities are probably superior to those in any other city in the world. As a consequence of the knowledge gained by visitors to Moscow, much more interest is taken in Russian concerns than was formerly the case.

The vital statistics of St. Petersburg have recently been published. It appears that the birth rate in St. Petersburg in 1894 was 31.4 per 1,000. This was almost exactly equal to the average for the preceding nine years. The total number of living children born, 31,429, and the population was about one million. Of the total number of births more than one-fourth were illegitimate. The number of deaths was 27,215, the mortality being 27.2 per 1,000. This figure was slightly higher than the preceding four years. On the whole, however, the death rate has diminished greatly during the last thirty years. Dividing the thirty years period from 1865 to 1894 in six groups of five years, the death rates of the bistres were respectively 42.9, 32.7, 34.6, 28.2, and 26 per 1,000. The infantile mortality is still particularly high. The death rate of children under one year of age was as high as 232 per 1,000 in 1894. These figures would be still higher did they include the deaths of those illegitimate children who are sent in large numbers every year to villages surrounding St. Petersburg, where they are brought up at the charge of the Foundling Hospital.

Incubators for Infants.

Dr. Vallin, of Paris, estimates the number of prematurely born infants at from 15 to 20 per cent. of births. Dr. Jules Bouvier, of Beyrouth, puts the number of newly born debilitated infants at five per cent. of births. There is a wide discrepancy in these figures, but it is absolutely certain that there are a very large number of children born who will quickly die unless the greatest care is taken of them. Of these children, according to Uffelmann, only 20 per cent. live twelve months, and 11 per cent. two years. Of 1,961 children born at the Paris Maternity Hospital in 1881, 641 were premature births. The mortality during the first two weeks of the prematurely born amounted to 32 per cent.; that of the other infants was equal to 8.62. The chief desideratum with weakly and prematurely born infants is to keep them warm and in an even temperature. In the olden time children after birth were frequently wrapped in sheep skins with the wool inside, and at the present time various devices are resorted to in order to maintain an even temperature.

None of these methods, however, are by any means efficacious. About sixty years ago Dr. Crédé, of Leipzig, constructed a box with double metallic sides; the space between these walls could be filled with hot water, so as to maintain the desired temperature. Dr. Tarnier, the designer of the modern "couveuse," received the idea from the artificial "couveuses" at the "Jardin d'acclimatation" for the rearing of poultry. The question of incubators has aroused much interest in England. During last summer an incubator show was held in London, and there has been erected at Kensington a structure where weakly children can be nursed and kept in new and model "couveuses." These latest incubators are somewhat elaborate affairs, but as they work automatically, require no constant care and are said to fulfil their purpose exceedingly well. As yet incubators have only been available for the rich, but it is proposed to establish in London and other large centers, incubator stations, from which, in answer to a message or telegram, incubators will be promptly despatched to whatever place they are needed.

SPINAL MENINGITIS.

GUST. PETERSEN (*Deutsche medic. Wochenschr., 1896, xxii, 579*). In making a positive diagnosis the following conditions were kept in view:

1. The clinical course during the duration of the epidemic resembled the well-known characteristic disease-picture of cerebro-spinal meningitis. Nearly all of the cases were treated in the hospitals of Berlin, and in this way the observation and hence the diagnosis could be very exact.

2. The pathologico-anatomical findings confirmed the clinical diagnosis. A post-mortem was made in twelve out of the fourteen cases that died.

3. The bacteriological examination of the spinal-fluid, obtained by means of Quincke's puncture, revealed the presence of Jaeger-Weichselbaums meningococcus intracellularis in every case. In three cases the puncture was not made, it is true, but the author believes that the opportunity for infection and the epidemiological connection among these cases had been such that the absence of a bacteriological examination seemed thereby counterbalanced.

He then reports twenty-two cases, from which the author comes to the following conclusions: "These were undoubtedly cases of epidemic cerebro-spinal meningitis. Infection was caused by personal contact, by carriers and by entering rooms which were infected. The disease showed a preference for the age of childhood, as the adult carriers of the infection remained well, while the infected children became ill and usually died. It also favored the poorer classes of inhabitants, and seemingly also persons in whom some injury to the head or some nervous disease would lead to the belief that an abnormal condition of the meninges, or of the cerebro-spinal fluid was present. The period of incubation was three to four days. In most cases some diseases of the upper respiratory tract preceded the nervous symptoms. The mortality seems excessively high for the number of cases reported; we may, however, assume that some of these, not having a lethal ending, ran their course with the symptoms of other diseases. The causes of the disease seem to exist and retain their contagious qualities outside of the human body for a long time.

SOCIETY REPORT.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON PEDIATRICS.

Stated Meeting Dec. 9, 1897.

Subperiosteal Nodes of Cranium.—Dr. W. A. Dunckel presented a girl of six years whose family history was good. The child had enjoyed good health. Last September the mother had first noticed some "lumps" on the head. When first seen by the speaker, early in October, there were a number of small nodes on the head, varying in size from a pinhead to a pea, raised above the surrounding skin not more than a sixteenth of an inch. They were exceedingly hard, and were arranged on both sides of the head, but not with any special reference to the sutures. The temperature was 99.4° F., and the urine was normal. The post cervical glands were enlarged and movable, but not painful. There were no other glandular enlargements. The only node not situated on the skull was one at the junction of the mucous membrane of the lip and gum. Dr. George P. Biggs, the pathologist, reported that the nodes consisted of fibrous and adipose tissue, and a few areas of small, round cells indicative of inflammation. Subsequently there appeared on the arm and wrist patches of a violaceous hue of the size of a quarter of a dollar, and arranged in concentric rings. They also appeared on the soles of both feet and on the back of one hand. Dr. George T. Elliott had diagnosticated this affection of the skin as erythema iris.

Dr. A. Caillé said that he looked upon this case as one of rheumatic nodes—a not very uncommon condition in children. These nodes, however, are more commonly situated around the wrists.

Dr. Sigmund Pollitzer concurred in this opinion, and said that this view was rather strengthened by the occurrence of the skin affection, which was quite commonly of rheumatic origin.

Favus of the Eyelid.—Dr. E. Libman presented a boy of eight years with this condition. He said that it was rare to find favus involving the skin of other parts of the body than the scalp without affecting the latter. Only fifty cases of this kind were on record. The specimen under the microscope confirmed the diagnosis. The origin in this case was not known.

Dr. Frederick J. Leviseur said that he would take exception to the statement that favus of the body is very rare—it was because the cases were not often reported. The special feature of interest in the case was the existence of a perfectly formed scutulum. Favus of the body very commonly appeared in a form closely resembling ringworm, rendering the diagnosis somewhat difficult. The treatment he favored was very thorough epilation. A single glance into the microscope should be enough to teach one the necessity for such a measure. In such a case as the one presented he would remove all the cilia and then apply some mild antiseptic ointment.

Dr. William S. Gottheil said that he could recall only one case of favus occurring in a native born American. The reason for this rarity of favus on the body he believed to be due to the fact that two or three weeks are required for the favus parasite to find lodgment in the hair follicles. Epilation should be the first step in the treatment.

Sclerema Neonatorum.—Dr. Libman presented a baby six weeks old, with this condition. The child had been asphyxiated when born, and had been slapped vigorously to restore respiration. When the mother first began to take care of the infant it was ten days old, and she then noticed for the first time the hardness of the buttocks. The body temperature was 99° F. when the child was first seen, and the indurated area extended very rapidly. In a few days the axilla and calves were involved, but at the present time these areas were improving. Both this patient and the preceding one had been seen in the dispensary service of Dr. Koplik. These cases, Dr. Libman said, could be usually classified in two groups, viz.: (1) Those occurring towards the close of a gastro-enteritis or other exhausting diseases; and (2) those occurring in premature or syphilitic infants, or those having pulmonary atalectasis at birth. In the latter form, the skin is blue and alabaster-like, and can be moved somewhat on the underlying tissues. The disease is rarely congenital, beginning usually before the eighth day. The case just presented belongs to the second class. The general condition of the child was quite fair. He had found on record in this country only eight cases, which was surprising when compared with the statistics of other countries.

Dr. GOTTHEIL said that he had never met with such a case here, and it was interesting to note that, contrary to the usual rule, the case appeared to be progressing towards a favorable termination.

Dr. S. POLLITZER said that there had been much confusion in the literature between cases of edema and true sclerema. The chief point of difference was the peculiar hardness of the cases of sclerema. It had been assumed that there was a solidification of the fat, but the histological examinations that had been made had thrown but little light on this subject.

Dr. W. L. STOWELL said that he had seen three cases, two of which had proved fatal. The third case was a little boy with sclerema of the muscles about the neck and chest, which continued for the greater part of the year, and then he recovered completely. The treatment had consisted in mercurial inunctions and the administration of general tonics.

Congenital Cretinism.—Dr. EMILY LEWI presented a brother and sister, both cretins, to show that the earlier these cases are treated the more permanent and perfect is the cure. The boy had first come under observation when fifteen months old, and had been under constant supervision and treatment since then. A recent trial had shown that as soon as the drug was withheld for a short tlme the symptoms would all return. The child can say "mamma" and "papa," but rarely speaks. The mental condition is more like that of a child of two years. The sister had been under treatment since five weeks old, and was now in better mental condition than the other child. The boy received two and a half grains of Parke, Davis & Company's preparation of thyroid, twice a day, and the baby gets half a grain, three times a day. Cessation of the treatment in the little girl does not cause a return of marked symptoms.

Dr. H. KOPLIK said that he had used iodothyrin, but had not obtained the same results as from the powdered thyroid.

A Portable Dry Bed for Infants.—Dr. Louis Fischer exhibited a portable "dry bed," designed by Kraut, of Munich, for the purpose of keeping children dry in bed, and dispensing with the usual diaper. The bed consists of a basket frame of rattan, divided into two compartments, the upper for the child, and the lower to provide a storage place for a rubber bag or urinal. The latter terminates in a long, funnel-shaped piece of rubber, which passes through a central opening in the bed and spreads out under the buttocks of the child. The baby is kept in position on the bed by a sort of laced corset. The inventor claimed that the baby kept in this bed was not likely to develop intertrigo, and Dr. Fischer said that after having observed its use in the case of the baby of five weeks at present occupying the bed, he felt that this claim had been substantiated.

Dr. T. S. Southworth thought the apparatus would be extremely valuable in securing urine for examination.

Dr. J. Milton Mabbott thought the contact of the child's body with the wet rubber would be likely to irritate the genital organs.

Dr. W. L. Stowell said that the apparatus might find a useful sphere in cases of extrophy of the bladder.

Milk Poisoning Occurring in Infants and Children who have been Fed on Pasteurized Milk.—Pasteurized Milk as a Food for Infants and Children.—Dr. H. Koplik read a paper with this title. He said that long ago Pasteur had found that milk could not be sterilized like liquor by subjecting it to a temperature of 60° to 65° C., but that it must be exposed to an additional half-atmosphere of pressure. A number of observers, after many attempts, had fixed upon a temperature of 75° as the point at which the milk must be kept for a certain time; then rapidly cooled and kept at a low temperature (10–15° C.) until used. It was only intended at first to use this method commercially in the dairy. It had been shown that most of the pathogenic germs were destroyed by pasteurization. The early investigators did not claim that such pasteurization would destroy all the bacteria, as had since been claimed by Dr. R. G. Freeman. The bacterial toxins in milk, which so commonly cause diarrhea, were not in any way destroyed or their production inhibited by the pasteurization of milk. Moreover, an element of great uncertainty surrounded the process of pasteurization. According to Russell, an examination of four samples of cream showed two to be sterile and two to contain fifty thousand bacteria to the cubic centimeter, six hours after milking, though collected under special precautions. As a rule, the older the milk the more bacteria after pasteurization. It had been found that the milk ducts of the cow always harbor filth and bacteria, and hence, that even after careful cleansing of the milker's hands, of the udder, and receiving the milk in a sterilized container, only the latter portion of the milk would be free from bacteria. It was evident, therefore, that in spite of all precautions in the most scientifically regulated dairy germ-free milk cannot be obtained. The bacterial contaminations of milk can be divided into three leading groups, viz.: (1) The lactic acid-forming group; (2) the butyric acid-forming group; and (3) the peptonizing bacteria. The first group is very active in causing gastro-intestinal disorders. Sterilization at 90° to 95° completely destroys the lactic acid group. Russell had shown that at least three separate varieties of acid-forming bacteria can be isolated from pasteurized milk and cream. The last two groups are not completely destroyed by any form of sterilization at or below 100°, but their influence could be minimized by a method to be subsequently described. At the present time we might have the proper percentages in the milk, but if the latter were not kept free from toxins and other contaminations certain disorders were almost sure to arise.

By the term "milk poisoning" he would designate a distinct set of symptoms which were, in some cases, insidious and serious, and, in others, very troublesome. Often the first suspicious symptom of this condition would be too frequent movements, or a child, apparently doing well, would suddenly have a large number of green, ill-smelling movements of an acrid character, and would return to the normal after a dose of oil. These were the mild cases. Others would have a few soft and sour movements. Sometimes the movements were simply more numerous than normal, and the baby would not increase in weight. Lastly, there were infants who took pasteurized milk well enough for a short time, and then developed a sharp attack of gastro-enteritis of a serious nature. In his own dispensary service, the Freeman pasteurizer had been used, the milk being rapidly cooled, and the people instructed to keep the milk on ice.

Dr. Koplik then cited a number of cases in which infants had had diarrhea while fed on pasteurized milk, and had quickly recovered on changing to sterilized milk. The following is an illustrative case: A boy of five years, weighing forty-one pounds, had been fed on sterilized milk for the first four years of his life. After stopping the sterilization he began to have attacks of diarrhea, and for five weeks before coming under the observation of Dr. Koplik, he had had two or more diarrheal movements daily. His diet consisted largely of pasteurized milk obtained from a laboratory. Once a day he would have a normal movement, and at night a profuse watery movement of normal color, but of foul odor. The attending physician looked upon the diarrhea as of neurotic origin. The pasteurized milk was stopped, and the boy placed on milk sterilized at 100° in the Arnold sterilizer. He was also given two doses a day of tannagen. The improvement was immediate; he rapidly recovered and has remained well.

Some of the cases had been doing well on sterilized milk before being placed upon the pasteurized milk. Dr. Lewi, in 1895, had shown that if milk were pasteurized with the Freeman apparatus and kept at 28° Cels. acidity developed in five or six hours, and reached its height in ten or twelve hours, and that twenty-four hours after pasteurization the milk would be curdled. On the other hand, in milk sterilized at 90 to 92°, as he had originally advocated, the acidity remained stationary for several days in warm weather, the lactic acid bacteria having been rendered inert. Milk for infant feeding should be heated to 90 or 100° C. (preferably the latter) for ten minutes; it should be rapidly cooled and kept below 20° C. until ready for use. In this way the peptonizing bacteria are kept inert. The argument raised that the high heat of sterilization rendered the milk indigestible had not been verified by years of observation. Pasteurization had no advantage over sterilization in its effect on the lactalbumins. A study of the waste products in the feces seemed to show that raw, pasteurized or sterilized milk possessed about the same digestibility when prepared in the same way and given to the same infant. The author concluded that pasteurized milk is an uncertain and in some cases a very dangerous food for infants.

Dr. A. Caillé said that the first practical suggestion of importance regarding the preparation of milk for infant feeding was that of Soxhlet. The proteids in the milk were changed by sterilizing the milk at 212° F. The clinical pictures given by the reader of the paper were counterparts of those from his own experience. He could quote numerous clinical records from his private practice, in which the simple substitution of sterilized milk for pasteurized milk had resulted in marked improvement. He had also experimented in hospital very extensively with both methods.

Dr. Walter Lester Carr said that in modifying milk we must consider changes resulting from the handling and environment of the milk supply. While he had used sterilized milk quite extensively, he had found that in certain individuals the albuminous constituents of the milk seemed to be unfavorably affected by the high heat to which the milk was subjected, and the nutrition of the infant was impaired. He had, therefore, been prepared to receive favorably the process of pasteurization, yet it was not long before he had found that this was even more unsatisfactory in many instances. He had repeatedly observed improvement in private patients on stopping pasteurization and substituting sterilization. During the past summer he had seen two very serious cases exemplifying this, in which absolutely no change had been made in the milk except the substitution of sterilization for pasteurization.

Dr. Rowland G. Freeman said that milk, either plain or modified, was, as a rule, the best food for infants. Raw milk always contains numerous bacteria, most of them harmless, but because of the numerous oportunities for contamination in the transit of the milk from the dairy to the consumer, there was urgent need for some process for destroying possible pathogenic bacteria. More than one epidemic of typhoid fever had been traced to a case of "walking typhoid" occurring in a milk-man. He thought the opinion had very generally prevailed in the medical profession that the continued use of boiled milk was injurious, and was even responsible for some cases of scurvy. It had, therefore, seemed to him desirable to make use of the lowest temperature that would render the milk sterile, at least as regards pathogenic bacteria.

He had recently advocated a temperature of 140° to 158° F., kept up for half an hour, as this was sufficient to destroy the bacillus of tuberculosis and of other common diseases. It was a question whether absolutely sterile milk was necessary. Milk was not sterilized by the ordinary boiling for a single time. The milk must be boiled under considerable pressure, or boiled day after day for several days. In his own experiments, he had not found many bacteria in the milk ducts of the cow. Neither did he think that the bacteria, which were almost entirely derived from the udder, were eliminated, even at the close of the milking. In criticising pasteurized milk, it must first be known that it has been properly pasteurized at a proper temperature, and that it has been quickly cooled and kept afterward at a proper temperature. In his laboratory work he kad been in the habit of leaving the milk on the table at the ordinary temperature of the room. Such bottles would often not show a precipitation of the casein for two or three days, and if kept in the refrigerator, it had been his experience that the milk had remained good for eight or ten days. His experience with pasteurized milk, properly prepared, had been entirely at variance with that already given this evening. If such cases of illness occur, they must be so rare as hardly to offset the advantages of pasteurization.

Dr. Henry Dwight Chapin said that clinical results alone should be relied upon to settle a discussion of this kind, and it did not seem that Dr. Koplik had made a very strong case against pasteurization. One disadvantage of sterilized milk was the effect of high temperature upon the fat. He had often noted clinically that babies fed exclusively on sterilized milk did not maintain a proper degree of nutrition. Such children often got thin, and he had been inclined to attribute this to a loss of fat from the food. In the sterlizer large globules of fat would often be seen on the milk, and the destruction of the fineness of the natural emulsion should, in itself, be injurious. In the future our advance in infant feeding would probably be in the direction of obtaining fresh and clean milk. He would be willing to run the risk of an occasional "walking typhoid" in a milk-man for the sake of securing healthful milk that had not been subjected to any method of sterilization. What he feared most was wasting or atrophy in infants, and he was free to confess that in many such cases he had not observed very brilliant results from sterilization. As a universal method of treating milk, sterilization did not seem to him to be in the line of progress.

Dr. S. H. Dessau said that he had been using for several years, even before the introduction of Dr. Freeman's pasteurizer, an apparatus which he would like to show in connection with this discussion. He had been long ago impressed with the fact that children kept constantly—all the year round—on sterilized milk did not seem to thrive as they should. He was of the opinion that raising the temperature of the milk to a certain point favors rather than retards the digestion of milk. The apparatus referred to was not impressive or scientific in appearance, as it was nothing more than the ordinary double-kettle used in the kitchen. Such a simple apparatus was easily managed, even by ignorant mothers, and the milk could not be scorched. He directed the attendant to allow the milk to remain for ten minutes after the water in the outer vessel had begun to boil. The milk could then be quickly cooled and kept in a cool place. Children fed on milk so prepared had seemed to him to thrive as well as those fed on regularly pasteurized or sterilized milk.

Dr. Charles G. Kerley said that from 1888 to 1892, at the Mount Vernon Infant Asylum, the milk had been regularly sterilized at 212° F. for half an hour, and a great many children had been fed upon it. Since that time he had used very largely in that institution the pasteurized milk, and he was positive that the weight of evidence, so far as the general well-being of the infants was concerned, was in favor of pasteurized milk. Nothing had been said this evening regarding the condition of the child's alimentary canal, although we had heard a great deal about what was put into it. He agreed with Dr. Chapin that we must look for future advance in obtaining fresh and clean milk that had not been subjected to any elevation of temperature.

Dr. Mabbott said that the statistics of the Nursery and Child's Hospital, collected by him, showed such a slight variation in the death-rate there during the last twelve years, that it was difficult to make any definite assertion regarding its bearing on infant feeding. During the first period of that time the children had been fed on modified, raw milk, heated to about the temperature of breast-milk; in the second period the babies had been on sterilized milk, and in the third period almost all of the children had been on pasteurized milk. The last years were in no way better than the average; hence it seemed to him that the most important advance in infant feeding had been in the modification of the casein, fat and sugar, so as to make the cow's milk more closely resemble mother's milk. He thought in country practice most physicians would prefer the use of milk that had not been sterilized, but in a large city the safest method seemed to be thorough sterilization.

ABSTRACTS.

ETHER NARCOSIS IN INFANCY.

Stoos (*Memorabilien, 1897, xl, 446*). Demme has pointed out that ether narcosis is not safe during the first years of life, as it is apt to cause irritation of the mucous membranes, bronchitis, broncho-pneumonia and vomiting; furthermore, the stage of excitation is said to last longer than in chloroform narcosis, and therefore very excitable children are hard to etherize. We often meet with shaking spasms; the awakening is not as quiet as after chloroform, and is frequently followed by vomiting, anorexia, and an irritable condition for 36 to 48 hours. For these reasons chloroform has been preferred as an anesthetic for children until recently, when a change of opinion has taken place. The surgeon at the present time concedes that ether is safer than chloroform. Stoos lost faith in the safety of chloroform narcosis in children since he saw the occurrence of chloroform collapse after its use in children. There are cases of death even reported from this cause. Ether does not irritate the mucous membrane of the trachea and the bronchi in small children more than chloroform. Children suffering even with a slight cough may be etherized without harm. A severe catarrh or disease of the lungs is of course a contraindication to its use. It has been claimed that profuse salivation occurred in children, and therefore the period of teething, in which salivation is increased, was not a suitable time for administering ether. Stoos has not had this experience. Intense salivation is usually caused by an existing coryza. The children should be placed horizontally, with slightly raised head, and turned to one side to facilitate the flowing off of the saliva. The assertion that the beginning of etherization is more difficult, slower and more unpleasant, the stage of excitation greater and longer than in chloroform narcosis, is without weight, if the ether is properly administered; within two to five minutes relaxation of the muscles is obtained. Nausea and vomiting do not occur more frequently than after chloroform narcosis. As a preparation to the administration of ether the stomach should be kept empty and a clysma may be given. Ether narcosis should be preferred to chloroform on account of its lesser danger. Rehn mentions that in the Frankfort City Hospital ether is now preferred to chloroform in children.

EXCESSIVE LIPOMATOSIS IN AN INFANT AT THE BREAST.

Heubner (*Allgem. Medic. Generalzeit., 1897, lxvi, 4*) presented a female child, 8 months old, weighing 39 pounds. The development of fat is confined particularly to the skin of the body and to the extremities, and is less marked on the face and head. The internal ogans are normal and the liver is not much enlarged. The child presents a slight craniotabes. No similar symptoms are present in the family of the patient, neither does any member of it suffer with a nervous disease or with diabetes. Though all the children in the family are quite strong and large, they do not present this extraordinary obesity. The patient is the third child of its mother. Its present weight is that of a child about six years of age. This abnormal obesity has seemingly commenced already in utero, for the mother complained of pain in the right side of the abdomen during the latter weeks of pregnancy. Labor was normal, though the weight of the child had already reached 15 pounds. The head is not enlarged out of proportion. The condition of the child is otherwise perfectly normal. It has two teeth, and is not mentally backward, but rather somewhat in advance of its age. It can sit alone and begins to walk. This abnormal development is difficult to explain. The child has been nursed, and has besides been given large quantities of coffee. It would be of interest to know what amount of nourishment the child was receiving daily. The question so frequently discussed, whether we must admit a peculiar tendency to this obesity or whether the deposition of fat can be explained solely by the relation of accumulated food to its small consumption, might be answered in this case that a certain natural disposition probably does exist, although the opposite view is taken by Hirschfeld in his latest work, entitled "Overnutrition and Undernutrition." Heubner was able to find in literature only one similar case, which was that of a fetus dead in utero, in which the whole body was covered with a layer of fat 2 cm. thick.

VAGITUS UTERINUS AND ITS RELATION TO THE FIRST RESPIRATORY ACT.

THORN (*Wiener Medic. Blaetter, 1897, xx, 48*) reports a notable case of *vagitus uterinus*, which was heard about twelve hours before birth and was followed by no injury whatever to the child. The case was that of an induction of labor on account of narrow pelvis. The labor was brought on four weeks before term by means of bougies. These bougies quickly induced labor pains, but they were removed too early and the pains became rather defective. The amniotic fluid flowed away in small quantities. On the fifth day following the introduction of the bougies labor pains were quiescent, temperature and pulse normal. General condition was so favorable that instrumental interference was not deemed necessary. Forced delivery would have given the child very slight chance for life, on account of the rigidity of the soft parts, and would place the mother in great danger. For this reason a Barnes dilator was introduced and distended with air. At the moment it was sufficiently distended a pain occurred, and soon after this the balloon burst with considerable noise. This was followed by the crying of the child two to three times. The sounds seemed to come out of a cavity, followed each other in quick succession, and were distinctly audible to all present. A new Barnes dilator was rapidly inserted, during which process some air and some amniotic fluid escaped. Breath sounds were not audible, and the heart sounds did not vary from their former frequency. Twelve hours later a boy was spontaneously born, who cried at once, showed absolutely no symptoms of aspiration, and has done well. Thorn does not think that the fetus at the moment of crying was in danger of asphyxiation, nor that he was endeavoring to breathe. The production of such sounds as were heard from the fetus may be induced by the expression in quick succession of small quantities of air through the upper air passages. Inspiration in this case was purely passive, represented by the passage of air under high pressure into the upper air passages. For this reason no breath sounds were heard and no matter aspirated.

OSTEOMYELITIS IN INFANCY.

N. Swoboda (*Wiener Klin. Wochenschr., 1897, x, 87*). Cases of acute purulent osteomyelitis occurring in infants have been up to the present time only reported in very small numbers. It seems strange that a disease which shows such a marked predisposition for the period of physiological growth should so rarely be present during the first year of life. It is true that this disease is overlooked frequently in the infant. We must also take into consideration that chance causes, *e. g.*, traumatism and the influence of intense cold, are much less frequently present in the infant. On the other hand, the opportunity for the reception of the infectious material is more frequent and more various during this period of life than at a later time.

From a consideration of the cases which have been published we learn that the clinical history is distinguished by the following facts:

1. The multiplicity of the foci in the bone. 2. The frequency of the separation of the epiphyses. 3. The frequent involvement of the joints. 4. The acute and usually fatal course of the disease.

These facts are more prominent the younger the patient.

The differential diagnosis must in the infant take cognizance of two varieties of bone disease—namely, syphilis and tuberculosis. Great difficulty is met with in the diagnosis of hereditary syphilis if we are not able to find other symptoms of this multiple disease than the appearance of an acute separation of the epiphyses and a secondary suppuration between the surfaces of separation and in the joints.

It may happen that a child without the slightest signs of syphilis is suddenly attacked by a swelling of the soft parts over the joints, extreme pain to the touch and to passive movement, and febrile symptoms. As the case progresses the pus may find its way externally, and it will be possible to pass a sound between the epiphysis and the diaphysis, and detect rough bone. A mistake in such a case is easy and the case can only be recognized as one of syphilis by the appearance of other specific symptoms. Swoboda reports a case in which a third disease had to be taken into consideration in the differential diagnosis—namely, a metastatic gonorrheal arthritis. Of the greatest importance, however, to the child is the proper diagnosis of the tuberculous diseases of the bones. Th. Rovsing has shown that this disease makes its appearance in the infant with acute fever and with such other symptoms that the diagnosis of an acute purulent osteomyelitis seems at first to be justified.

It is, however, possible in contrast to the latter to obtain a surprisingly rapid cure by simply cutting down on the disease-focus in a manner similar to that done in tuberculous peritonitis. The knowledge of these neglected processes is of great practical importance, as their occurrence might easily lead to a disregard of antiseptic measures. The treatment of this affection consists in an early incision and thorough drainage of the seat of the disease. Pain and fever are to be combated by the application of cold (ice-bag, cold water coil, cold packs).

THE TREATMENT OF FOREIGN BODIES IN THE EAR.

L. Jacobsohn (*Der Kinderarzt, 1897, vii, 13*) gives the following hints for the proper removal of foreign bodies from the ear: Contrary to the practice still followed by many physicians of using pincers, hooks, forceps and such like instruments for the removal of a foreign body from the ear, we should always attempt to remove it by injections of warm water, or oil if it is a pea, bean or other body which is liable to swell. It is best to hold the head firmly. The pinna of the ear is in children drawn backward and outward, in adults backwards, upwards and outwards and away from the head by the left hand, the rubber tubing of the syringe carefully inserted into the external canal, but not so far as to be in danger of pushing the foreign body still further, and now forcibly syringed until removal is accomplished. Usually this result is obtained at the first syringing. It is a pity that even to-day it frequently happens that previous to such a procedure attempts at instrumental extraction have already been made either by the relatives or by students and physicians. In these cases the patient, usually a child, makes a rapid movement with its head while the instrument is within the external canal, and the foreign body is pushed further into the ear. Very frequently some traumatism is also inflicted on the canal, the drum membrane or even on deeper parts, as the ossicles or the inner wall of the tympanic cavity. In consequence of this injury an inflammation of the external meatus and occasionally of the middle ear is produced. The first leads to a greater impaction of the foreign body and to the formation of pus behind it. As the flow of pus through the external canal is obstructed, we may now have to face all the dangerous consequences following a retention of pus within the ear. It is, however, well to bear in mind that these consequences are not due to the perfectly harmless foreign body, which might perhaps have remained in the ear without harm for years, but solely to the unnecessary attempts at instrumental extraction by inexperienced persons. When such a maltreated patient is brought for treatment it is well to inquire whether grave symptoms of retention of pus, as high fever, great pain, or maybe cerebral symptoms are not already present. If this is the case, the removal of the foreign body must be done under chloroform narcosis. As, however, this measure is accompanied by grave dangers to the life of the patient, it should at all times be given over to the specialist, whose knowledge of the topographical anatomy of the organ of hearing, of otoscopy and of operative interference within the ear cavity is taken for granted, even should this necessitate a postponement of the operation for several hours. If no grave symptoms are present, confidently make use of the syringe. An impacted foreign body may frequently be removed by this perfectly harmless method. It will, of course, be necessary in such a case to use the syringe with greater perseverence. After the removal, the moist ear should be packed with four per cent. salycilated cotton for at least two days. Before attempting to remove a foreign body from the ear its real presence must always be determined by means of the ear speculum, and never objectively by the use of sounds, as the story of patients may very easily be based on an error. Aside from the fact that communications made by children are not always reliable, it not infrequently happens that a foreign body has been in the ear, but has fallen out, the patient still believing it to be present.

PIGMENTED NEVUS TREATED BY RŒNTGEN RAYS,

L. Freund (*Wiener Medic. Blaetter, 1897, xx, 45*) presented the child to the Vienna Surgical Society. The nevus covers the back, the sides of the thorax, the upper portion of both arms and the neck; the pigmented skin is thickly covered with hair. The treatment was administered in such a way that, the child being seated on a chair having a perforated support, with its back against the vacuum tube, the rays struck the nape of the neck. This region was submitted to the action of the rays daily for two hours; on the eleventh day the hairs began to come out in this region, at first sparingly, later in larger quantities. This falling of hair lasted for seven days, until there was total alopecia of the neck. Two days after the beginning of the loss of hair, a dermatitis, accompanied by redness and moisture, and taking its origin from two small excoriations, developed. An experimental illumination for twelve days with the rays of the anode exerted no influence at all on the growth of hair. In order to observe the sole effect of the cathode rays, the rays of electricity were conducted into the ground by means of a screen of pasteboard covered with a thin coating of aluminium, which was placed between the vacuum tube and the patient. The result of this treatment was the falling of the hair again from the illuminated locality (the back); a week later a dermatitis again developed. These experiments proved that the success of the treatment was only to be ascribed to the cathode rays, that the long hairs of the scalp fell out easier than those growing on the nevus, and that the cathode rays, to produce their effect, must be applied for some time (seven to twelve days). The falling out of the hairs may be explained either by the occurrence of a dermatitis or that the electrically charged molecules are discharged by the Rœntgen rays, in which case, under the continuation of this abnormal condition, a disturbance of the nutrition and a destruction of the cells in the skin takes place. The author compares this falling of the hair with that occurring in alopecia areata.

Dr. Zemann found on examining the hairs removed by this experiment an atrophy of their roots, having different appearances. Some of the hairs ran to a point below, or looked as though broken off, or even as though swollen below and unraveled. Prof. Kaposi did not think that a comparison with alopecia areata was quite correct, for in the latter the proliferation of the basement cells in the scalp ceased at once; also, the removal of the hair took place at the same time in all the hairs. The process, on the other hand, had some similarity to that which took place in insolation, and is probably brought about by a disturbance of the circulation. In insolation the ultra violet as well as the visible rays exerted some influence and produced erythema and seborrhea of the skin by causing a hyperæmia at first through irritation and then by paralysis of the nerves of the vessels, and thus affecting the nutrition of the scalp and the sebaceous glands. In the same manner the action of the cathode rays may be explained; if, however, the vessels returned to their normal tonicity, the hairs may perhaps grow again.

TEMPORARY INTUBATION IN TRACHEOTOMY.

Emil Fronz (*Jahrb. f. Kinderheilk., 1897, xliv, 10*). The question as to the indications for intubation and for tracheotomy may be answered by the following conclusions:

The method at first pursued, of specializing the indications and deciding that one case should be intubated, the other tracheotomized, was soon abandoned, as tracheotomy became necessary whenever intubation proved insufficient, or seemed to be directly dangerous, so that tracheotomy became a substitute for intubation in those cases which seemed favorable for the latter, but in which intubation proved insufficient. Accordingly intubation became a prophylactic measure; its vocation was to prevent tracheotomy whenever possible. The indications which we meet in the beginning of an operation for diphtheritic stenosis of the larynx are the following: If the diphtheritic croup is localized, the diphtheritic process shows no tendency to deep necrosis, no complications are present in the lungs, and the child is not under two years, intubation is indicated.

All other cases of diphtheritic stenosis should be tracheotomized, viz.: Severe forms of diphtheria tending to deep necrosis, lung complications, and occasionally children under two years of age.

In all of these cases, however, the intubation tube may be inserted and allowed to remain during the operation, *i. e.*, a temporary intubation should be done for facilitating tracheotomy and minimizing as much as possible its dangers. By this means you avoid the danger of compression of the trachea by over-extension of the head, and narcosis is facilitated. In this manner the operation need not be hastily performed, and it can be done with less difficulty.

THERAPEUTIC PROBLEMS OF ANTITOXIN.

E. BEHRING (*Centralbl. für die gesammte Therapie, 1897, xv, 113*). The antitoxin of diphtheria, which is the only remedial factor to be considered in the serum, is perfectly harmless and cannot under any circumstance exert a poisonous influence either in the human being or in animals, in the healthy or in the diseased organism, for it has been demonstrated "that the specific diphtheria antitoxin bears no relation to anything else in the world, but only to the specific poison of diphtheria." "The living cells are influenced neither unfavorably nor favorably by antitoxin." Pure diphtheria antitoxin is a non-poisonous remedy, because: (1) Blood serum containing antitoxin is in exactly the same condition as normal blood serum; (2) the bad effects of serum containing antitoxin do not increase in proportion to the quantity of antitoxin present. After it was found possible to incorporate 600 antitoxin units with one cubic centimeter of serum, and no unsurmountable difficulty was found even in incorporating a 600-fold serum with half a cubic centimeter, the unfortunate discovery was made that the strength of the more powerful serum did not remain constant on keeping, but was at least occasionally diminished. By converting solutions of antitoxin of the strength of a more than 500-fold normal serum to the dry form, it was possible to produce a preparation which can be used in practice. Although still containing salts and albumen, it can be kept an unlimited period of time, is readily soluble in water, does not contain any substance for its preservation, and contains 5,000 antitoxin units in one gramme. The time for practising immunization is now come, as this new preparation can be used without any unpleasant after-effects, the single dose being only 1-40 grm. dissolved in 2.5 cc. of water. Behring's experiments on the dissemination and excretion of diphtheria antitoxin in healthy animals and man have taught him that after a subcutaneous injection of antitoxin the blood of the animal experimented on contained more antitoxin in 1 ccm. after eight hours than could be expected if equally distributed after twenty-four hours, *i. e.*, six times the quantity estimated, and that in the course of a few days the amount of antitoxin became smaller and smaller. It is also said that in the human subject the usual immunizing method for diphtheria does not grant a perfect protection after four weeks. It does not seem possible by increasing the dose of antitoxin to prolong materially the immunizing period, for the reason that excretion becomes accelerated with the longer duration of immunization. The dissemination of the diphtheria poison and of tetanus poison in the animal economy takes place quite differently from that of antitoxin, for hardly more than one hundredth part of that poison reaches the blood, which, according to estimation, should be found distributed over the whole body. This is also true of the poison of tetanus when injected into the veins.

STOMATITIS EPIDEMICA.

Stoerk (*Wiener Klin. Wochenschr., 1897, x, 77*). The appearance in the human being of epidemic stomatitis contemporary with epidemics of mouth-and-foot disease in animals has frequently been observed. Stoerk's attention has been drawn to this by the communication made to him by Dr. Fruhwald, who had recently met with numerous cases of stomatitis in his practice, particularly in children brought up on cow's milk. They would not yield to the application of astringent mouth-washes until they were deprived of their milk. The frequency and severity of the process, together with the contemporary mouth-and-foot disease in the animals, led Stoerk to suspect a direct infection.

The first case treated by him for a violent stomatitis was a boy ten years of age, the son of a butcher. The patient was brought with the announcement that he was unable to eat on account of such a great swelling in the mouth that all attempts at eating produced the greatest distress. As a matter of fact the mucous membrane of the gums was found greatly infiltrated and swollen, so that a depression was present between each tooth and its gum; both the upper and lower jaw were similarly affected. His first thought was that the case was one of mercurial poisoning, and closely questioned the father on that line, but was unable to elicit any fact which could enlighten him. The case was treated as one of mercurial stomatitis with tincture of opium, rathania and nitrate of silver. No improvement, however, could be seen after fourteen days. In marked contrast to this case were those which Stoerk had recognized as an infection due to mouth-and-food disease. In these cases the treatment had been much more successful, because of the fact that it had been pursued with an antibacterial remedy. The good results obtained from antibacterial treatment seemed to substantiate the view expressed by Dr. Siegel, of Britz, that we have to deal with a bacterial disease in these cases of epidemic stomatitis.

THE TREATMENT OF OPHTHALMIA NEONATORUM.

Dr. Eversbusch (*Centralbl. für Kinderheilkunde, 1897, ii, 1*), as long as the cornea is intact, does not use either nitrate of silver, nor iodoform, nor corrosive sublimate, if both eyes are affected. If one eye alone is infected, the other is daily treated by the installation of one drop of a two per cent. solution of nitrate of silver, as recommended by Credé. A single drop should be applied between the slightly opened lids by means of a glass rod. He is able to corroborate Frænkel that even the daily repetition of this prophylactic measure for weeks has never produced permanent irritation in the normal eye.

The healthy eye is still further protected by the application of some borated vaseline to the base of the nasal ridge, and by always cleansing the healthy or less affected eye first. The cleansing of the eyes, which should be practised every hour or two, night and day, allowing the child some sleep, however, according to the degree of inflammation and the amount of pus secreted, is the most important factor in the treatment of ophthalmia neonatorum. We may also make use, in addition to the careful removal of the pus, of Lamhofer's method of washing out the conjunctival sac with a luke-warm physiological solution of common salt, or by a three per cent. solution of boric acid, using sterilized absorbent cotton. The washing should not be done with a syringe, but with glass tubes made especially for this purpose.

He also makes a daily instillation of one drop of a one-quarter per cent. solution of physostigmin—if possible in the forenoon. The secretion of pus is frequently diminished in a marked manner by this measure.

No baths are given the child while suppuration is at its height, as it was found to increase the discharge, probably through chilling the patient.

The general nutrition of the child is also of great importance. Neglect in cleansing the oral cavity, early weaning of the child or depriving it of sterilized milk, will frequently make a seemingly favorably progressing case worse. He observed repeatedly this in the new-born who had to be dismissed from hospital to dispensary treatment on account of the clamor of relatives. In this way we may also explain why children born out of wedlock, who contract this disease with great frequency, furnish the greatest number of bad results. Intercurrent profuse diarrhea should be carefully watched for, as it may be accountable for a serious increase of the blenorrheal symptoms, as well as occasionally of a sudden remission.

The doctor himself should, of course, carefully examine the eyes at least once every day. He should convince himself, especially in the beginning of the treatment, that his directions are strictly followed. The solution of nitrate of silver, which ought to be prescribed by itself in each case and properly labeled, must always be kept perfectly clear and in a black or brown vial.

When some loss of the substance of the cornea has occurred the treatment with nitrate of silver is not only permissible, but even imperative, and the form of application should be with a hair-pencil (not dropping it into the eye). It is well to commence with a one per cent. solution, and gradually to employ a one and a half to two or three per cent. solution. This cauterization should be repeated daily. If a profuse purulent secretion continues to form in spite of the application for one to two hours afterward of ice-water compresses, the process may be repeated twice in twenty-four hours. This treatment should be continued until the purulent secretion has disappeared, gradually diminishing the strength of the solution to one or one-half per cent., as the discharge becomes less and the swelling of the conjunctival mucous membrane disappears. Ulcer of the cornea, whether situated centrally or at the periphery, may be favorably influenced after repeatedly penciling with nitrate of silver two or three times at equal intervals during the afternoon, by the instillation of a solution of physostigmin alternating with one of scopolamin.

℞ Physostigemin salicyl 0.05
Sol. sublimat. (1.0:5000.0) . 10.0
M Sig. Poison—for doctors' use.

℞ Scopolamin hydrobromic . . 0.01
Sol. sublimat. (1.0:5000.0) . 10.0
M Sig. Poison—for doctors' use.

The installation of physostigmin, though continued for a number of weeks, does not occasion any pathological irritation even in the eye of the new-born. Even when physostigmin is copiously applied, an equal and even dilatation of the pupil may always be obtained by the application of scopolamin. It is of interest as a prognostic indication that a change for the better is always preceded by the appearance of pupillary contraction. The reparative process in ulceration of the cornea is also markedly promoted by applying over the lids cloths dampened with dilute chlorine water. These may be used lukewarm at first, and as the purulent secretion diminishes they may gradually be applied warmer.

PARENCHYMATOUS KERATITIS.

Csapodi (*Centralbl. f. Kinderheilk., 1897, ii, 5*) reports the case of a girl, six years of age, whose right eye was injured by a playmate with the finger nail. Four days later there was visible on the cornea, besides marked lessening of the bulbous tension, a superficial, gray, infiltrated ulcer. After the lapse of three more days a typical parenchymatous keratitis appeared and the locality of the ulcer could be recognized by the infiltrated grayish discoloration. A week later the same affection made its appearance in the left eye. This fact at once raised the suspicion of syphilis, and the previous history was found to point in the same direction. It seems that the traumatism inflicted had acted as an exciting cause which brought about the inflammation, a manifestation of the latent disease. Analogous cases might possibly cause some difficulty, forensically considered, in the way of diagnosis.

VACCINATION AND IMMUNITY IN ERYSIPELAS.

VOGES (*Zeitsch. f. Hyg. u. Infections krankh., 1896, xxii, 515*). Immunity against erysipelas will always play an important part in the history of bacteriology, because it is obtained in the human subject analogous to the immunity against smallpox, by treating the patient with a diluted virus obtained by inoculating a series of animals only slightly susceptible to it (rabbits). This method, recommended by Pasteur, although giving positive results, cannot be applied in practice, according to Voges, for the reason that not only are a series of pathological changes produced in the hog by injecting the active germs of erysipelas, and a further infection of the hog-pens may occur, as these germs undoubtedly pass out of the intestines of the hog with the feces in an active virulent state.

The same objection may be urged against Lorenz's process, passive immunization with the serum of a highly immunized hog, followed by active immunization with highly virulent cultures of erysipelas, as well as against a secret preparation, "Porcoson," prepared at the Farbwerke Friedrichsfeld, which contains the bacteria of erysipelas in pure cultures. Voges' conclusion is that up to the present time we are not yet in possession of a remedy against erysipelas which is available in practice. Concluding this critic he reports the experiments made by him to determine the manner of the action of the serum obtained from animals which had been immunized against erysipelas. These experiments are of interest for the reason that he has succeeded in establishing facts in favor of the anti-corpuscles of erysipelas, which are equal to those discovered by Pfeifer in favor of the anti-corpuscles of cholera: the specific active anti-corpuscles of erysipelas are active only in the animal and we have reason therefore to believe that an inactive, partly antagonistic formation of the antitoxin is changed into an active efficient modification in the animal economy. The action of the immunizing serum of erysipelas is bactericidal.

PRACTICAL NOTES.

Chronic Constipation.-Dr. Furst (Berlin) for a long time has employed natural bitterwaters with excellent results in chronic constipation, preferring the Hunyadi Janos water. Children will with this (four tablespoonfuls of milk to one of bitterwater) it is rarely refused. Its internal use, however, frequently has the objection that before it reaches the site of constipation, the colon, it becomes concentrated from the absorption of its water. It thus acts as an irritant on parts which are not affected. For this reason he tried it by rectum and obtained satisfactory results. He now orders an enema, by means of a soft rectal tube 12 to 15 cm. in length, early in the morning three times a week, adding, for example, to one-half to three-quarters of a liter of water of the temperature of the room, according to the age of the child, one tablespoonful of the bitterwater for a child one-half to one year of age, and for each year adding one tablespoonful up to the maximum dose of six tablespoonfuls for a child six years of age. This quantity is sufficient in children from seven to fourteen years old. These enemata are always well tolerated, if the above dose is not exceeded, particularly if we bear in mind that weak, anemic and very delicate children are at all times poor subjects for a course of bitterwater. It is also necessary to be certain that the case is one of chronic constipation and not one of intestinal catarrh alternating with diarrhea.

Thread Worms.—In those cases of thread worms, in which a macroscopic and microscopic examination of the fecal matter is impossible, Müller de la Fuente. in the *Munch. Med. Wochenschr., July 6, 1897*, mentions the following signs as diagnostic auxiliaries: According to his observations, the sudden occurrence of severe abdominal pains which can be exactly located are characteristic. At the seat of pain there is present great tenderness on pressure. The absence of continued fever militates against the inflammatory character of this circumscribed pain, as we only meet with a slight rise of temperature towards evening when thread worms are present. Convulsions can be traced directly to these worms and disappear immediately after the latter are expelled. Their connection with chorea on the other hand is not a direct one. The author furthermore calls attention to the frequent epidemic appearance of this trouble, even where filth may be excluded. He also refers to the oftentime vicious character of the disease, as well as to the great frequency with which contraction in the field of vision occurs in cases suffering with thread worms. This phenomenon also disappears after the worms have been removed.—*Therap. Wochenschr., 1897, iv, 869.*

Morphine Poisoning—TORRE reports a case of morphine poisoning cured by permanganate of potassium, in *La. Med. Moderne, No. 62.* The patient, a girl not quite five years old, had swallowed 0.06 gramme of hydrochlorate of morphine and was found in deep coma with cold extremities, cyanotic lips, slow respiration and greatly contracted pupils. He administered a solution of permanganate of potassium containing 0.2 gramme to 200 grammes of water, supplementing this at short intervals with three subcutaneous injections of potassium permanganate 0.1, distilled water, 10.0. After the third injection all symptoms improved in such a manner that he was able to leave the child. He gave half a teaspoonful of a solution of permanganate of potassium 0.06:120 grammes of water, every hour. Three hours later the child was in a deep normal sleep from which it could only with difficulty be awakened; the pulse and respiration were normal and the pupils reacted well to light. Retention of the urine, for which the catheter had to be employed a few times, was the only after effect of the morphine poisoning. The administration of a cathartic hastened recovery.—*Kinderarzt.*

A Stercoral Tumor in a child 17 months old was observed by JORDENS. The child was attacked by frequent vomiting and bloody stools, was greatly excited, cried continuously, but had a normal temperature. Examination revealed a tumor of the abdomen situated above the pubis, which was hard and round to palpation. The finger introduced into the rectum detected a tumor. A high injection was administered with an Esmarck's apparatus, following which the tumor felt by the finger disappeared from its old situation to the left iliac fossa. The child passed a few liquid stools. During the following days the vomiting ceased, but the nervousness and the ceaseless crying continued, and the abdomen became quite sensitive to the touch. The temperature rose to 38.6°. The child took some sterilized milk, frequently without vomiting, and had a few fluid stools spontaneously. The tumor in the abdomen remained present, however, and the patient died on the fifth day from exhaustion, symptoms of intussusception never having made their appearance. Autopsy showed there was no intussusception, no sign of peritonitis, and no injury to the intestines. The ending in death of this case was quite exceptional, for, even where an occulsion of the intestines takes place in these cases, we are always able, by purging and clysters, to keep the lumen of the bowels open.

Prolonged Diphtheria—JESSEN describes a case of prolonged diphtheria, which is now and again observed, in which deposits and inflammatory irritation, accompanied by the virulent Lœffler bacilli, existed for five months. No important constitutional symptoms were present. Syphilis had been excluded.—*Centralbl. f. Innere Medic.*

Perityphlitis.—KAREWSKI, in a paper on perityphlitis in children, called attention to the important point that urinary tenesmus and pain on urinating was frequently observed, and that it might be mistaken on this account for catarrh of the bladder.—*Deutsch. Med. Wochenschr.*

Diagnosis of Tracheal Stenosis.—AUFRECHT gives as a diagnositc symptom in stenosis of the trachea the following: The usual loud bronchial breathing is absent or supplanted by a low, softer respiratory murmur. The explanation is as follows: The currents of air which produce bronchial breathing behind the fissure of the glottis are dependent on a certain current-velocity, which is assured only by an equal width of the tracheal tube.—*Centralbl. f. Innere Med., 1897.*

The Treatment of Whooping-Cough.—E. DITEL (*Der Kinderarzt, Kronika Lekarska, 1897, viii, 201*) compares the various remedies at present employed for whooping-cough as follows:

Antispasmin was administered in ten cases and did not by any means prove itself a specific in this disease. It did not influence the frequency of the paroxysms, although it had some slight influence on the intensity of the attacks. It proved to be a perfectly safe remedy. As it is, however, necessary to use it continuously for ten or twelve weeks to obtain any marked results, and as it is very high in price, it is not to be recommended.

Oxide of Zinc and *Extract of Belladonna* were also employed in ten cases, in doses of two to three grains of zinc oxide with one and a half grains of extract of belladonna. This combination diminished the number and intensity of the attacks; the duration of treatment was 8 to 11 weeks.

Zinc Oxide, alone, was administered to twenty-five children, two of whom died with some pulmonary affection. In all other cases the disease ran a favorable course, duration about the same as in previous cases. Oxide of zinc does not seem to be a specific for whooping-cough. The author only recommends its use in cases of whooping-cough complicated with diarrhea.

Terpin-hydrat was employed in doses of 3 to 5 grains three or four times a day, in fifteen cases ranging from two to five years in age. The duration of the disease was somewhat less, seven to ten weeks. Terpin-hydrat is indicated in broncho-pulmonary complications.

Bromide of Sodium was only given to five children, from two to six years of age, in doses of 3 to 5 grains twice or three times daily. It seems to diminish the intensity of the paroxysms. The duration of the affection was seven to eight weeks.

Antipyrin, two to three grains at a dose and given three to four times a day, was tried in eight children from 3 to 6 years of age. Its effect was only fugitive, so that it was found necessary to rapidly increase the doses.

Antipyrin and *Codein* (2 to 3 grains antipyrin and 1-16 to 1-8 grain codein) three to four times daily, was given in 15 cases. Duration of the disease was six to eleven weeks.

Corrosive Sublimate Solution, 1 to 1,000, applied to the pharynx by means of a camel's hair brush was carried out in five cases, without however yielding any result after three weeks.

The author arrives at the conclusion that it is necessary to make a change in the treatment according to the stage of the disease and its complications. He advises during the convulsive period bromides, followed in a few days by codein; if fever is present, he uses antipyrin, and if there is a bronchitis he uses terpin-hydrat.

We have not as yet discovered a specific remedy and must be satisfied with carrying out a symptomatic treatment.

Eczema.—

℞	Formalin	0.25
	Zinci oxyd	
	Talci, āā	25.0
	Vaselin *ad*	100.0

M. Ft. Unqt. Sig.—For external use.—*Monatsh. f. Dermatol.*

Seborrheic Eczema.—

℞	Pyrogallol. oxydat	5.0
	Vaselin	
	Adip. Lan., āā	25.0

M. Ft. Unqt. Sig.—To be rubbed into the skin twice a day.—*Unna.*

Thread Worms.—

℞	Hydrargri bichloridi	0.05
	Aquæ destill	150.0

M. Sig.—A tablespoonful in a glass of cold water; use as a clyster.

Round Worms.—

℞	Olei Ricini	15.0
	Santonin	0.4

M. Sig.—Two or three teaspoonfuls daily.

Or,

℞	Santonin	0.05
	Hydrargri chloridi nitre	0.01
	Sacch albi	0.2

M. Ft. Pulv. tales, No. xii (12). Sig.—x one powder every two hours for a child four to six years.

Chorea Minor.—

℞	Sodii bromidi,	
	Potassii bromidi	
	Ammonii bromidi āā	2.0
	Aquæ destillat	200.0

M. Sig.—A tablespoonful thrice daily, in half a goblet of Selters water for a child eight to ten years.

For Difficult Dentition.—

℞	Sodii bromidi	0.5
	Aquæ floris aurantis	
	Syrup ætheris, āā	30.0
	Aquæ destill	120.0

Sig.—For external use. Rub the child's gums with this mixture several times a day after nursing.

PEDIATRICS

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ORIGINAL ARTICLES.

THE TREATMENT OF SCARLATINAL NEPHRITIS.

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WITH varying frequency in the different epidemics, we observe nephritis as a complication or sequel of scarlet fever. As a rule it sets in during the end of the second or the beginning of the third week after the appearance of the exanthema, but it may develop later, though rarely after the sixth week.

As to its causation, there is a divergence of opinion. Early exposure to drafts and cold and other indiscretions during convalescence may play some role as a causative factor, but a great many, perhaps most of the cases, develop where all possible care has been taken. For this reason the view of a microbic origin is more frequently upheld. It seems likely that the microbes of scarlatina generate ptomaïnes which have a particularly damaging influence upon the kidney and the walls of its capillaries.

I will state right here that in some measure, however, serviceable preventative measures may be taken, namely through a proper stimulation of skin perspiration during the period of eruption as well as desquamation. In this regard I quote a report of Schill (*Münchener Med. Wochenschrift, 1896, No. 42*) who states that in 63 cases of his own and 47 cases of Schellenberg, treated by daily warm baths of 95° F., all but two cases escaped nephritis. The baths were given twice a day during the first week and once a day during the second, with a duration of ten minutes. A good prophylaxis, moreover, requires rest in bed or in a warm room, avoidance of drafts and sudden changes of air, a liquid diet and attention to the bowels until all symptoms of the disease have disappeared.

The most frequent and almost typical of nephritis in scarlet fever is that of *glomerulo-nephritis*, showing proliferation and desquamation of the capsular epithelial cells of the glomeruli, sometimes combined with a capillary thrombosis. Less frequent is the *interstitial form*, presenting hyperplasia of the interstitial connective tissue.

The first symptoms directing attention to a nephritis are edema, albuminuria and sometimes anuria. Quite frequently physicians neglect to inform the parents of their little patients that nephritis may follow even the mildest form of scarlet fever (in fact the lighter the exanthema the more frequent and severe seems to be the nephritis) and days pass by that might have been useful in lessening the attack when a general edema first calls the attention of the nurse to the now fully established disease. The medical attendant should make it an object not only to fully instruct the parents, but also to examine the urine at least three times a week during desquamation.

Albuminuria may be present during the period of eruption, but it is usually slight and not accompanied by anasarca. It is present in cases with high fever and is not due to nephritis, but to other changes which favor the transudation of serum from the blood (probably functionary changes of the walls of the glomerular capillaries). Albuminuria due to scarlatinal nephritis is usually attended by the presence of epithelial cells, more or fewer red blood corpuscles, leucocytes, hyaline, epithelial or blood casts, but in some exceptional cases there may be albuminuria while the urine is free from other pathological elements. Frequent examinations of the urine are necessary as the urine may be nearly normal for a few succeeding days and later on present all the changes due to nephritis. It is particularly to be recommended to filter the urine and examine the sediment, even if no albumen is present. Cases have been reported where the autopsy revealed nephritis, while no albumin had been found during life.

More important than the albuminuria, which is quite varying in frequency and intensity, is the amount of urine voided. There may be complete anuria for 24 hours, or only the passing of a few tablespoonfuls of turbid urine during this period. Its specific gravity is usually high, its reaction always acid, its color now lighter, now darker, from light to dark brown, with an admixture of blood and uric acid crystals.

Edema may be absent during the entire course of the disease; in most cases, however, it is soon noticeable, though greatly differing in intensity. Wherever it is light, it usually appears only on the eyelids, on the dorsum of the feet and around the malleoli. In other cases there is a general anasarca of the subcutaneous cellular tissue, more rarely with an edema of the scrotum and penis. The edema is frequently more pronounced on that side of the body upon which the child is in the habit of resting.

It must not be overlooked that edema without albumen in the urine is not infrequent after scarlatina. According to Filatow (*Litteraturbeilage z. St. Petersb. Med. Wochenschr., 1897, No. 5*) it is mostly caused either by a weakening of the heart's action through disturbances of the nervous apparatus of the latter, or by an alteration in the capillary walls under the influence of the scarlatinal poison.

Ascites is not infrequent; less often do we observe serous effusions into pleura and pericardium, rarely edema of the aryteno-epiglottic folds.

Hypertrophy and sometimes dilatation of the left ventricle of the heart is prone to develop in the course of scarlatinal nephritis—more certain and intense in protracted cases (Leube)—in consequence of the increased blood-pressure in the aortic system, the decreased discharge of fluids by the kidneys, the ill-nourished mÿocardium and the poisoned condition of the nerve-ganglia of the heart under the influence of the scarlatinal ptomaïnes. The changes in the heart are clinically not always demonstrable.

The pulse may be irregular and weak if the heart fails to provide compensation, or full and slow with the increased blood pressure, or of no particular variation in mild cases.

The temperature seldom exceeds 102° F., keeps mostly between 99° and 101°, is sometimes subnormal. A rise in temperature is often coincident with an increase of blood and albumen in the urine (Henoch).

Uremia may set in without warning, but is usually preceded by anuria or a much diminished quantity of urine, vomiting, headache, somnolence, slowness and aryhthmia of pulse.

Prognosis.—Cases of medium intensity usually terminate in full recovery; when, however, there is deficient urinary secretion or a prolonged anuria with extensive and rapidly appearing anasarca, especially when complicated with edema of the lungs, the prognosis is unfavorable. Further, if after an abeyance of the symptoms, blood and albumen appear again in the urine, our prognosis should be guarded. (Henoch.)

Treatment.—The first requirement is absolute rest in bed in a well-aired room of an equable temperature between 70 and 75° F.; the second, to give quick relief to the engorged kidneys by heightening the excretory function of skin and intestines, and by decreasing the work done by the kidneys, through the institution of a proper diet; the third, to increase the usually greatly diminished quantity of urine.

Only to a certain degree can the excretion of the solid constituents of the urine be performed by the skin; the maximum amount of these products excreted with the sweat is from 0.5 to 1.0 per thousand, and by the most active perspiration—which is surely not always permissible—not more than one-tenth of the urea appearing in the urine during 24 hours can be excreted (*Leube*, *Handbuch der Spec. Therapie*, *Bd. vi.*) Moreover, a forcible excretion by means of the sweat glands is not void of danger, because the loss of fluid is too great in comparison to the amount of excreted urea. If this loss is not readily made up for, there will be an accumulation of waste products, which decidedly favors the outbreak of uremic symptoms. Diaphoresis should therefore be moderate and followed by the ingestion of plentiful fluids. Among the diaphoretic measures I give preference to the warm bath of 98 to 100° F., in which the child is immersed from 15 to 20 minutes, or for a shorter period if it should be restless or frightened.

During the bathing cold compresses are applied to the head. Afterwards the child is put into the warm bed and wrapped into a well-warmed blanket, wherein it remains from one-half to two hours. Friction of the skin may be applied under the blanket. Usually profuse perspiration will result, which, if lacking, may be facilitated by the administration of hot drinks (lemonade), or by the use of Jaborandi leaves, ten gr. made into an infusion with hot water, or by nitrate of pilocarpine, one-twentieth gr. for a child of five years subcutaneously or by the mouth. The latter drug is tasteless and easily borne by an irritable stomach, but should be given with great caution on account of its depressing effects, and discontinued as soon as the urgent symptoms are relieved. In mild cases one bath a day will be sufficient, but two and even three baths can be given if necessary.

Hot baths (as recommended by Liebermeister) of 95° F. brought to 105 or 106° F. by the gradual addition of hot water, are not to be recommended, as they relax the cutaneous blood vessels in such a degree as to cause the child to become uneasy and chilled, yes, even collapsed. Edema of the lungs and eclampsia are a direct contra-indication.

Should the warm bath not be tolerated or for some other reason be unobtainable, it will often suffice to wrap the child into a sheet wrung out of hot water and surround it with a warm blanket. To make the heat more constant, warm water bottles wrapped in moist cloths may be placed against the body and legs of the child just outside of the moist sheet. As a rule the children rest comfortably in the wet pack and perspire without difficulty.

Other observers recommend the hot air bath by means of a tent, or by placing the nearly denuded patient, covered by a blanket, on a chair under which steam is generated from a vessel heated by an alcohol lamp, but I never found these appliances necessary, nor do I consider them practicable.

Poultices applied to the region of the kidneys are serviceable in the intervals of bathing. They can be made of pulverized flaxseed, or of one part of mustard powder to twelve of flaxseed, mixed with sufficient water.

Laxatives are often necessary; citrate of magnesia or comp. Jalap powder in 10 grain doses, repeated if necessary in two hours. Podophyllin in repeated doses of one-twentieth to one-tenth of a grain, are mostly efficient. Active catharsis is not laudable and should be strictly avoided in feeble children. Sometimes an aperient enema is preferable. Ashby and Wright recommend large enemata of hot water, especially where little or no urine is voided, the urine being passed when the enema is expelled.

Diet.—The feeding on richly nitrogenized food undoubtedly favors the retention of products of nitrogenous waste in the system, which the epithelial cells in their impaired eliminative function are not able to dispose of. The resulting intoxication will lead to an outbreak of that complex of symptoms which we term uremia. It is, therefore, a clear indication to adminster only such food as will furnish the smallest amount of nitrogenous waste and is readily assimilable. An absolute milk diet, which has many advocates, does not meet this indication; milk is too rich in nitrogen, and may, if taken exclusively, disturb digestion greatly; besides a good many older children object to it. A diet containing mostly fat and carbohydrates, as commended for many years by Aufrecht, appears to meet all indications. I am in the habit of prescribing gruel or soups of barley, oatmeal or rice, and other light farinaceous food, cooked fruit, baked apples, fruit jelly, orange juice, and young vegetables, but only a limited amount of diluted milk. After the subsidence of the acute symptoms, I allow some white meat, eggs, and a large quanity of milk.

Last, not least: how can we, with the least injury to the kidneys, increase diuresis?

The normal quantity of urine passed by children from two to five years of age is from 450 to 750 cc. in 24 hours. In acute nephritis this amount is greatly lessened, often approaching anuria. Our aim should be to remedy this condition speedily, but not forcibly. It would be quite desirable if we could stimulate the amount of urine to about one-half of the normal, and in mild cases the ingestion of a sufficient amount of fluids will accomplish this. In serious cases even the best diuretics are given without result. As to the latter I hardly ever prescribe them. The irritating effect of most diuretics is unquestionable and I have always failed to see any good therapeutic effects from their use. In ordering drinks for the purpose of allaying thirst, increasing diuresis, and washing away waste material, there is to be taken into consideration the amount of urine passed by the child and the degreee of perspiration and elimination of fluids by the bowels.

From this the physician should judge and prescribe as exact as possible the amount of fluid to be taken by the patient in 24 hours. Pure spring water and two or three wine glasses of some mineral water per day, like Wildunger or Vichy, also lemonade may be ordered. A mildly diuretic lemonade is much in use, consisting of one drachm of bitartrate of potash dissolved in one pint of boiling water, into which one lemon, cut in small slices, has been put. This is sweetened and taken in 24 hours by a child two years old.

There can be no doubt that alcoholics are strictly to be avoided, considering their strongly irritating effect upon the kidneys. Even where a weak condition of the heart seems to invite their use, I should prefer other stimulants, of which we have plenty that are less harmful.

Acetate of potassium is one of the mildest diuretics. If used at all it can be given in three to five grain doses every three hours.

Digitalis has probably no direct effect on the kidneys and will only do some good where diuresis is insufficient on account of a weakened condition of the heart, and even then it is in my estimation not as serviceable as the tincture of strophantus, which has a quicker effect and is less harmful.

Slight hematuria may be more relieving than injurious; when obstinate and combined with much anemia the tincture of chloride of iron (three to five drops every two or three hours) is undoubtedly of great service. Ergot is less reliable, and astringents like tannic acid are obsolete.

A uremic condition requires in sthenic subjects with full, hard pulse, a free evacuation of the bowels by elaterium, or senna infusion, or by an enema of water and vinegar (equal parts—Henoch); leeches, whose bites are not left to bleed, behind the ears or on the temples; icebag to the head. If the pulse is small and irregular, hypodermic injections of caffeïn and camphor alternately, or the tincture of strophantus, the latter especially where edema of the lungs is present, may be used. Pilocarpine and the opiates are contraindicated in the uremic state.

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THE "FEEBLE-MINDED"—HOW AT PRESENT DEALT WITH.

By T. Telford-Smith, M.A., M.D.,
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THAT America is far ahead of England in the recognition by the State of its duty to educate and care for its feeble-minded members, is shown by the fact that in sixteen of the States fully equipped institutions (nineteen in number) are maintained by the Government for the training, education and custody of these defectives. And that this policy is recognized as a right, wise and successful one is shown by the fact that other States of the Union are adopting a similar procedure.

In America it is recognized that not only as a measure of philanthropy, but also as a measure of political economy the education and care of the feeble-minded is a duty of the community. In England, up to a comparatively recent date, all attempts at the improvement of the condition of this helpless class have been left to the efforts of voluntary charity. It is, however, to the honor and credit of the Metropolis that she early recognized the duty of her citizens in this matter, and the success of the asylums at Darenth (opened in 1875, and maintained by the rates) with both school and custodial departments, is an object lesson to the country at large.

This success, combined with that shown by the five institutions (Earlswood, The Royal Albert Asylum, Eastern Counties Asylum, Western Counties Asylum and Midland Counties Asylum), supported by voluntary contributions, has gradually awakened public opinion in England to the need for more widespread and complete treatment of the feeble-minded members of the population.

The number of this class amounting to a probable total of 50,000, as calculated from the somewhat unreliable statistics of the census returns, of whom upwards of 20,000 are under twenty years of age.

The school-board of London initiated a movement in 1891 to open day schools in different centers in the Metropolis for the special instruction of "such children as by reason of physical or mental defect could not be properly taught in the ordinary standards or by ordinary methods," but they were not intended " for scholars so feeble-minded as to be included in the category of idiots."

There are now thirty such centers in London, with a roll of about 1,150 children.

Several provincial cities (Leicester, Birmingham, Nottingham, Bradford and Bristol) have now adopted this method of dealing with those dull or backward children who form a border-land group between the high-grade imbecile and the normal child. Whether it is fair to stigmatize this group as " feeble-minded " is a serious question, seeing that already in America the term " feeble-minded " has come, more or less, to be regarded as including the whole class of idiots and imbeciles.

Several of the English County Councils have recognized the need of providing special treatment for their imbecile charges by opening, in connection with their lunatic asylums, special and separate departments for this class. Among these may be mentioned the counties of Nottingham, Middlesex, Lancashire and Hampshire.

In treating the imbecile, however, it is admitted that an entirely distinct institution from the lunatic assylum, with special equipment and administration, is the most advantageous, scientific and effective method; and it is an encouraging sign of the gradual education of public opinion on this question that the parish of Birmingham, as well as a combination of the various Unions of Cumberland and Westmoreland, seriously contemplate the establishment of separate and special rate supported asylums for their imbecile and epileptic paupers.

Such special asylums should be used both for the industrial training and for the life-long care of the majority of this class.

They would thus be valuable not only as places of education and protection, but also as a preventive measure.

There can be no doubt that a large proportion of the increase in our imbecile population is due to the absence or laxness of supervision given to the imbecile women who drift from time to time in and out of our workhouses. The first annual report of the " New York State Asylum for Feeble-Minded Women " stated that about twenty per cent. of the whole number of inmates received had borne illegitimate children, and thus probably multiplied the evil in geometrical ratio.

A considerable contingent of our expensive criminal classes are without doubt congenital imbeciles who have reached adult age.

Would it not be more philanthropic as well as more economical to have retained them while still youths, and made them, as far as possible, industrially self-supporting in a custodial asylum ?

As to the lower grade or idiot cases, it has been said that by institution care, for every five idiots cared for, we restore four productive persons to the community; for, while at home, the care of each of these children practically absorbs the time and energies of one person, in an institution the proportion of paid staff is not over one to each five inmates.

Thus, when looked at from a broad standpoint, it is doubtful whether the present system of allowing our feeble-minded children and adolescents either to remain under the lax and undisciplined care of their friends or to drift into the workhouses or lunatic asylums, has even the plea of cheapness to recommend it. It is questionable whether present cheapness in this matter is true economy.

TINEA TONSURANS AND TINEA CIRCINATA.*

By John Edwin Hays, M.D.,
Louisville, Kentucky,
Professor of Anatomy and Dermatology in the Hospital College of Medicine, etc.

THIS boy, A. S., is three years old. He was brought to us for treatment two weeks ago with some scalp trouble, which appeared about a year and a half ago. There was first noticed a small patch, or several little patches, on the scalp, which grew gradually until the present size was reached, which occupies three-quarters of the entire top of the head. The mother states that the child has been treated by a number of doctors, but nothing seems to have been of material benefit.

Whenever patients come to you with any skin trouble, you should make a thorough examination of the entire body, as we did when this patient was brought to us two weeks ago. At that time you will remember we also found several patches upon the back and about the shoulders. The disease is tinea circinata, a disease which prevails during childhood and which is due to the trycopyton parasite. Consequently, being a parasitic disease, you will frequently find it prevailing among children of the same family, or among children who are in the habit of sleeping or playing together. The disease may be communicated by coming in contact with clothing worn by affected children, or by using the same towels, etc., etc. There are many other ways by which the disease may be communicated from one child to another.

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*Clinical lecture delivered at the Hospital College of Medicine.

The parasite which causes the disease cannot be seen except by the aid of a magnifying glass. It is not an animal parasite, but a vegetable fungus, and the same parasite which produces the disease on the scalp called tinea tonsurans, or on the bearded portion of the face called tinea barbæ, or on other portions of the body called tinea circinata.

I have told you that it was much easier to destroy the parasite of tinea circinata than of tinea tonsurans, for the reason that the parasite can be more easily reached by the remedy in the former. On the scalp the parasite digs down deeply into the tissues, occupying a place around the hair bulb. It is difficult to apply a remedy which will penetrate the tissues to sufficient depth to reach the parasite.

In the case before us you can readily see considerable improvement in the appearance of the scalp since the child has been under treatment. The remedy we gave the mother at that time has been used according to our directions, and the patches on the back and shoulders have almost entirely disappeared, but those on the scalp are still evident, though they do not look as angry as when the child was first brought to us for treatment.

This disease is one which we are not likely to confound with any other skin or scalp trouble, consequently we will not dwell upon the differential diagnosis. And I will say as to treatment that there are a number of remedies which are capable of curing this disease if you are able to apply them in such a vehicle that the remedy will penetrate deeply enough into the tissues to reach the parasite. Some remedies have a greater penetrative action than others, and while you may use sulphur, mercury, resorcin, ichthyol, and quite a number of other parasiticides, you will find that some will yield better results than others. I have frequently used for the last year or two a combination of carbolic acid, iodine and oil of turpentine with glycerine. The formula is:

℞	Acid carbolic	1 drachm,
	Tincture iodine	2 drachms,
	Ol. terebenth	2 drachms,
	Glycerine	3 drachms.

M. Sig.—Apply twice daily with camel's hair brush to affected spots.

I find this application is about as effective as any I have ever employed, and it has the advantage of being comparatively painless; if any pain is experienced it is of a slight nature compared to the application of the plain tincture of iodine or any of the stronger applications. We have in this combination three things capable of destroying the parasite, viz.: iodine, carbolic acid and oil of turpentine. This particular combination has a superior penetrative effect, going deeper into the tissues than any other liquid preparation with which I am familiar.

Another admirable application in the treatment of tinea is a five per cent. solution of the oleate of mercury in oleic acid. This is an efficacious application in the management of ring worm. Oleate of copper is also an admirable remedy. We find that copper is a strong parasiticide, and especially is it antagonistic to these vegetable parasites. The old-time remedy was to take a copper coin and dissolve it in vinegar and make application of the resulting solution to the patch of tinea. In that case you are applying acetate of copper, which is also a good preparation.

This disease seldom develops after the age of fifteen years; the moisture perhaps does not exist between the hair bulb and its sheath after that time. These cases are rather tedious to cure. You will find it will take a period of several weeks, or even months, to bring about a complete cure. For that reason you should persevere with the remedy with which you begin. I think there is little to be gained by making frequent changes in the use of your remedies in the management of this disease, but when you select one which seems to meet the indications, then go ahead with its use and do not abandon it until you have given it a complete and thorough trial.

It is well when this disease makes its appearance in a family where there are other children, to isolate the child until the disease has been controlled, because it almost invariably spreads if it breaks out in a family in which there are several children, or in which the children of different families are in the habit of playing together, etc.

You will observe the appearance that this patch presents; the scalp is red, also the hair is scanty, and if you will look closely it does not present the healthy aspect which normal hair does. It seems to lose its vitality; it becomes lusterless; very brittle; a great deal of it breaks off level with the scalp, the hair that remains presents a stubby appearance. If the disease has not existed a great length of time, you will find that the hair will grow in again; it does not destroy the hair permanently, but it will grow and be as thick over the patches as over other parts of the scalp, provided the hair bulbs have not been destroyed.

I think, notwithstanding the fact that this boy has had the disease for a year and a half before a cure was effected, the hair will grow over the surface of these patches as thickly as it was before. The mother is anxious to know if he cannot be cured in two months: It is very unwise to guarantee a cure of this disease in a certain time, because most of the cases will persist for several months. In a skin hospital of one of the eastern cities I was told that it was very seldom that a case recovered under three months' treatment when the disease affected the scalp, and some cases lasted a much longer period of time.

Tinea is quite an interesting disease to study. We have three distinct varieties, viz.: tinea tonsurans, tinea barbæ and tinea circinata; the first involving the scalp, the second involving other hairy portions of the face, the third involving other regions of the body not covered by hair. Then we also have another form of tinea occurring on the body, the tinea versicolor, due also to a parasite, but different from that constituting the cause in the other three varieties.

We will instruct the mother to continue the treatment already outlined in this case, and we hope to bring the patient before you from time to time to demonstrate the progress toward recovery. We have every reason to believe that a complete cure will result under the plan of treatment that we have instituted.

EDITORIAL COMMENTS.

Vaccination in Early Childhood.

There appears to be in all parts of the world among the lower and uneducated classes a deep rooted and unconquerable prejudice against vaccination. This feeling has been recently exemplified in the case of the colored population of the Southern States, who have a perfect dread of vaccination and will resort to any device to evade the enactment of the law. In Atlanta, in several instances, physicians have been compelled to take around with them armed policemen to enforce its fulfilment. With the negroes and illiterate classes it is simply a question of ignorance, but in some countries this anti-vaccination sentiment has spread to the more or less educated part of the community. In England the crusade against vaccination in many parts of that country has been so vehement that it was decided some years ago to appoint a royal commission to make a thoroughly exhaustive enquiry into the whole matter. This commission has now been sitting at intervals for a period of seven years, and have in consequence collected much valuable information bearing on the subject. Their final report is now in course of being published. As to the desirability of early vaccination the mass of evidence in its favor leaves no room for doubt. The *British Medical Journal*, commenting on the conclusions arrived at by the commission in this relation, says: "If the inquiry were whether smallpox, which in former times was a disease of children, as measles and whooping-cough are at the present day, has under vaccination departed to a great extent from childhood and transferred its attacks to later periods of life, from which the vaccinal protection has more or less departed, the answer was a most emphatic 'Yes.'" J. Jasewicz has collected statistics which seem to show that the immunity of vaccination in infancy lasts a much shorter time than is commonly supposed. In the case of 23 children under six years of age, vaccination was successfully performed in seven, 35 per cent. Jasewicz therefore recommends more frequent revaccination in early childhood. The reports on the various outbreaks of smallpox which have occurred in Gloucester, Leicester, Warrington, and in many other English towns within late years have just begun to be published, and one and all afford the strongest possible evidence of the efficacy of vaccination. In the epidemics at Gloucester, Leicester, and Warrington, there were many features of special interest in regard to the efficacy of early vaccination. To quote again from the *British Medical Journal:* "In Gloucester there had been primary vaccination default reaching to over 80 per cent. in the years immediately preceding the outbreaks of smallpox. In Gloucester, too, the disease owed its spread to elementary schools. Given an invasion of schools in a town in which infantile vaccination has been largely neglected, rapid and extensive spread of smallpox is what might have been expected, and is what actually occurred. In Warrington, on the other hand, where infantile vaccination had been well looked after, it is gathered from the inspector's report that a special and interesting feature of the case was the fact that the disease did not break out among children, but in a place occupied by adults." Dr. Coupland, referring to the Leicester outbreak, which was very virulent, says: "It is impossible to ignore the fact that these children must have been peculiarly susceptible to the contagion of smallpox, and no one at all conversant with the data of smallpox outbreaks can doubt that, if these children had been vaccinated, so many, if indeed any of them would have been attacked by the disease." At the meeting of the New York Academy of Medicine, on October 18, the question of the possible evil results following vaccination, and especially vaccination when performed carelessly, was fully discussed. The evidence in favor of efficient vaccination is so overwhelming that none but the prejudiced or ignorant can doubt. The word efficient is used advisedly, as, unfortunately, vaccination is by no means always efficient, and from this circumstance has arisen much of the bitter feeling against it. As Dr. J. H. Huddleston remarked at the meeting in October: "Vaccination was too commonly done in just such a way as to most emphatically favor infection." When vaccina lymph is furnished which has been carefully tested by experts, the dangers attending the operation are practically nil. The contention, too, that purpura hemorrhagica is a sequel of vaccination is not borne out by facts. Under certain conditions it seems possible that septicemia can be induced by vaccination, although this requires more convincing proof than has been as yet forthcoming. Instances of this kind are very few and far between. Careful asepsis is undoubtedly advisable. In short, the vaccination should be done with care, and pure, tested calf lymph should be used. When these precautions are taken there can be no serious danger, and it is assuredly the only trustworthy protection at present known against smallpox, alike for the individual and the community.

Modified Cows' Milk as a Substitute for Mother's Milk.

A thoroughly satisfactory substitute for mother's milk has yet to be devised, and it has been the object of many scientific men for years past to so modify cows' milk that it shall in all essential respects contain in its composition the properties of human milk. Infant feeding has probably in this country reached a higher degree of perfection than in any other, and still it cannot be asserted that the ideal infant food has been produced. A large number of the artificial foods are excellent and fulfil their purpose up to a certain point, but even the best of them cannot take the place of natural food, while to the want of human milk and to unsuitable artificial food is due most of the infantile disorders.

The great difficulty to be overcome in the preparation of a suitable modified milk has been to reduce the excess of casein by means otherwise than by the addition of chemicals. Professor Gaertner, of Vienna, claims to have solved this difficulty, and according to several prominent European physicians the use of cows' milk prepared in the manner recommended by him has been attended with the most marked success. In Europe this new infants' food has undergone a trial of two years, but in this country the observations on the use of it have not been carried on long enough to altogether substantiate the rosy descriptions of its efficacy given in the German journals, although Dr. Louis Fischer reports favorably of it.

A Novel Cure for Whooping-Cough.

There are many curious customs and superstitions existing even in this enlightened age, and among the most peculiar are some practised by the peasants of Ireland for the cure of various complaints. In certain districts of that country whooping-cough is treated in quite a unique manner. A few months ago much amusement was caused by a case which came before the Coroner's Court in Belfast, in which whooping-cough was treated in a child by passing the sufferer three times under a donkey. Mr. W. R. Le Fann, in his amusing book on Irish life, relates several other instances of a like nature, and draws attention to the fact that nearly all the most popular remedies are for the relief of whooping-cough or chicken-pox. Some donkeys are believed to be possessed of curative virtues in a much higher degree than are others. A man living in County Cork owned an animal which could boast of more than a local reputation. This man used to lead his donkey through the streets of the City of Cork, crying out: "Will any one come under my ass for the chin-cough?" (A name given to whooping-cough in the rural parts of Ireland.) In County Down the charms in vogue were more various. Two kinds of food obtained from two first cousin who are married, and soup made from the tails of mice is there regarded as a panacea for chicken-pox. In the agricultural districts of the East of England, wearing a potato around the neck is esteemed a charm against rheumatism.

Weight of Infants at Birth.

In the *New York Medical Journal* of November 13 will be found the notes of a case in which the child at birth weighed eighteen pounds and four ounces. This weight is marvelous enough in itself, and exceeds that of any hitherto recorded instance in our recollection, but the weight is not the only extraordinary feature of the case, as it is also stated that the parents were both small and young, and that the labor proceeded naturally without the aid of forceps. In nine thousand births Scanzoni found an average of nearly seven pounds per child for both sexes. Lusk noted that in two hundred children that came under his notice the average weight at birth was seven and two-third pounds for both sexes, the heaviest child attaining the weight of eleven pounds. Waller reports the birth of a child weighing fifteen pounds and fifteen ounces. The account in the *Journal* of the birth of this immense infant has attracted some correspondence in regard to children of abnormal size at birth, and other practiioners have narrated their experiences in the same direction A lady doctor gives the case of a baby weighing, when born, two pounds and a half, who was at the age of six years only as large as a normal two-year-old child, but who, on arriving at the age of twenty-two years, had developed into a man of six feet three inches. Another instance is related by the same doctor where the infant at birth would go in a quart cup, and whose hand was so small that it would pass through an ordinary wedding ring. This child, however, grew to be a man of phenomenal size, whose height was six feet and four inches, and whose weight was between three and four hundred pounds. Such cases are interesting only as being distinctly out of the ordinary run, and it cannot be argued from their occurrence that the majority of puny, weakly infants will make large and strong specimens of humanity. On the contrary, it may be asserted, without much fear of contradiction, that a baby at birth which weighs but two and a half pounds will, in all probability, not live for twenty-four hours.

Sleep for Children.

Some remarkably interesting treatises have been recently published relating to the scientific phenomena of sleep. The authors of these works, while agreeing in the main with the efficacy of "sleep as nature's sweet restorer," still hold the opinion that too much sleep is decidedly harmful, and that the majority of people indulge in the habit to a greater extent than is good for their health. Their views, as expressed on the subject in regard to young children, are both instructive and novel, and in brief are somewhat as follows: That even infants at the breast are allowed too much sleep; that they need not only time to sleep but time to be a wake if their intellect is to be awakened. The tendency to sleep shown by children and the uneducated is explained on the ground "that their psychic world is so poor that it is almost impossible for them to take any interest in their own thoughts and ideas. It is argued that even during the first four or six weeks of life there ought to be two waking hours during the day, and as the body grows the duration of wakeful period should gradually increase. All methods of putting children to sleep artificially by means of monotonous sensations are strongly censured, including the crowing of lullabies and the rocking of babies in cradles or simply in the arms. Rocking the child in the arms or cradle is said to produce sleep partly because consciousness is fatigued by a series of monotonous sensations and partly because at the same time artificial anemia of the brain is provoked. Finally the approximate period of sleep necessary for children at different ages is given. Between the ages of one and two years there should be from six to eight waking hours; between two and three years, seven to nine waking hours; between three and four years, eight to ten waking hours; between four and six years, nine to eleven waking hours; between six and nine years, twelve to fourteen waking hours; between nine and thirteen years, fourteen to sixteen waking hours." There is much common sense in the foregoing remarks, but there is also a tendency to rather unduly press the point as to the harmfulness of oversleeping, particularly in the case of very young infants. Rocking a child in the cradle to any great extent is doubtless harmful, but it is difficult to understand in what manner the "crowing of lullabies" can effect the health of a baby. It is also no easy matter to fix the amount of sleep that a person—child or adult—should take by any hard and fast rule; a large degree of latitude must be allowed in this respect, as it is a notorious fact that individuals of different temperaments and constitutions require varying periods of sleep.

Some Remarks on Measles.

The name measles carries one's memory far back to the days of one's childhood. There are a few complaints, as measles, whooping-cough and scarlatina, commonly termed the catching maladies, which are looked upon as a necessary adjunct of childhood, and which for a person not to have contracted in his youth, seems somewhat of a reproach. Such an individual is lacking in the ordinary early experience of his species. Measles is generally regarded as a trifling complaint to which little or no danger is attached. The usual definition of the disorder in a medical text book is much as follows: "Measles is an acute specific fever of short duration, characterized by catarrhal symptoms and a red rash, the latter appearing on the fourth day. It is a disease of childhood, and rarely occurs more than once in the same subject. If the patient be well nurtured and kept under good conditions it usually ends in a speedy and complete recovery." This description may be applied with truth to a mild attack, and where the facilities for good nursing and care are available, but what of an epidemic in the overcrowded poor districts of a large town, where such conditions are wholly wanting? The fact appears to be too often overlooked that measles is in a high degree infectious at every stage. Consequently, when an outbreak occurs in a school, hospital or in any place where children are massed together, the infection will spread like wildfire. Scarcely any of the infectious diseases are liable to so many severe and fatal complications. Nevertheless measles is still looked upon as comparatively harmless, requiring little or no treatment. This belief is assuredly not warranted when the disease gains a foothold in the poverty stricken parts of a large city. It would appear that the time has come when more attention should be paid to the prevention and treatment of these so-called simple diseases of childhood, particularly when the fact is considered that measles and whooping-cough are responsible for much of the present infantile mortality.

Dr. Joseph O'Dwyer.

It is with deep regret we announce the death of Dr. Joseph O'Dwyer, the inventor of intubation of the larynx. His death occurred as we were going to press, too late for the lengthy encomium due one whose professional life was such a credit to the science he represented. The proper notice will appear in the February 1st issue of this Journal.

SOCIETY REPORTS.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Meeting held on November 11, 1897.

Albuminuric Retinitis.—Mr. Arnold Lawson and Dr. G. A. Sutherland showed a case of albuminuric retinitis in a child aged twelve years. The patient was brought to hospital suffering from headache and vomiting. Up to the end of 1896 she had enjoyed good health, but was then confined to bed for three days with an illness characterized by headache, vomiting and great prostration. Since then her health had never been good, but the only definite symptoms complained of were headache and vomiting. She had never suffered from scarlet fever or cardiac affection. There was no history of Bright's disease in the family. The child was well nourished, not anemic or pigmented, but very small for her age. There was a diffused, heaving impulse over the precordial region, the apex beat was felt three quarters of an inch outside the nipple line on the fifth intercostal space, and a short systolic murmur was present at the apex, followed by an accentuated second sound. The pulse was small and of high tension, and there appeared to be some thickening of the vessel wall. The urine varied in amount from 25 to 40 ounces per diam, and the specific gravity was always low, 1006 to 1010. Albumin was constantly present, but varied from the merest trace to three per cent. Hyaline and granular casts were detected on microscopic examination. There was a slight amount of edema over the tibiæ. Ophthalmoscopically the fundus of each eye presented the features of albuminuric retinitis, the changes being more advanced and more typical in the left. There was marked optic neuritis, with tortuous and congested veins, the arteries being unaffected in size. The retina in the neighborhood of the papilla, was pale, and in many places hazy through exudation, which concealed the vessels. Irregular white spots were scattered over the retina, and in the left fundus there was a typical silver-white stellate gure on the inner side of the macula, with its apex at the macula. The vision in the right eye was $\frac{6}{6}$ and in the left $\frac{6}{60}$. The child had never at any time complained of her eyes, and was quite unaware of anything being the matter with them. The case had been under observation for a fortnight, and while no change had been observed in the general condition, fresh patches of effusion and some fresh white spots had appeared on the eyes. The authors regarded the condition as dependent on primary chronic interstitial nephritis. The symptoms present were very similar to those met with in typical examples of that affection in later life, but it was extremely rare to meet with them at such an early period.

Mr. Nettleship recalled a case of albuminuric retinitis in a young boy whose exact age he had forgotten. The condition of the retina improved considerably while he was under observation. In the case of a young girl said to be suffering from Bright's disease he found well marked neuro-retinitis. She made a good recovery as regards the eyes but the sight remained impaired and the condition of albuminuria persisted for some years.

Mr. Lawford had met with a case of albuminuric retinitis in a boy of sixteen who was very small for his years. The first symptom complained of was failure of sight. Under treatment in hospital both the eyesight and the general condition had improved. The etiology in his case remained obscure.

Mr. Holmes Spicer had recently seen a child who was under treatment in hospital with all the symptoms of acute nephritis. Retinal hemorrhages were present without any changes in the optic nerve.

PHILADELPHIA PEDIATRIC SOCIETY.

November 9, 1897.

Dr. J. H. Jopson reported two cases of congenital hereditary edema occurring in male children respectively four and one and one half years, and exhibited the older patient. The father had suffered from a similar condition in childhood, which was later outgrown. In both cases there was a marked subcutaneous edema of the lower extremities, as shown by pitting on deep pressure, with some thickening of the skin.

In the older child the condition was most strongly marked. There were pads of edematous tissue over the feet, the legs were swollen nearly to the knees, and at birth there was present an edema of the foreskin. The child had been circumcised two and a half years ago, the prepuce being thickened and much elongated. The temperature of the limbs was normal, the skin somewhat pale but soon turning a natural color after exposure to the air, and the function of the limbs was unimpaired. Physical examination and study of the urine gave negative results. In the younger child the genitals were not affected. Both children were exceptionally strong, healthy and intelligent. These cases were evidently of extreme rarity. Milroy, of Omaha, had described a case very similar in character, and had reported twenty-one other cases occurring in the same family during six generations. Van Harlingen and Griffith had also described a somewhat similar condition in a child under their care. The pathology of the condition was not known. Osler and Welch had been inclined to place Milroy's cases under the head of angio-neurotic edema. The cases shown to-night certainly did not suggest any resemblance to what we know of that disease. Neither did they resemble either sclerema neonatorum nor edema neonatorum. There was evidently some anatomical condition as a causal agent. No special treatment had been instituted, but the mother had practised tight bandaging of the extremities in the older child, without effect. In both children, however, the swelling was somewhat less marked than at birth.

Dr. Van Harlingen: I have not very much to say about this case because the number of such cases that come under a single observer's view is naturally very small. I cannot at present recall any case, excepting the one I saw with Dr. Griffith, which we tried in vain to get down here last winter.

That case resembles this one very closely. As I recall it, however, Dr. Jopson has said about all I could say about that patient, excepting in regard to the fact that the leg in that case was nearly cylindrical and looked like a log of wood. The ankle was very much swollen, while the foot was less tumefied. The affection was unilateral, and in addition to the testicle being enlarged, there was also some edema of the face. When I saw the case for the first time I took an erroneous view of it, being inclined to consider it a case of hereditary bone syphilis, and it was not until Dr. Griffith demonstrated the edematous character of the swelling, which was firm, and hard as a board, that I came over to that view.

In regard to the relation of such cases as the present one to angio-neurotic edema, they can not be brought under that head at all. I am rather surprised to find how much confusion there seems to be in the minds of many in regard to the disease known as angio-neurotic edema. That affection is much more closely allied to urticaria and local affections of the vaso-motor system of a similar nature than it is with any conditions similar to that we have seen here this evening. I think that the angio-neurotic edemas should be entirely separated from congenital troubles, such as the present case. I should be inclined to think that this was due to some congenital disease or malformation of the lymphatics, but I should like very much if we could get an examination of one of these cases. I am strongly inclined to believe that we should find some congenital change in the distribution or structure of the lymphatics. I have not made any study of the literature of these affections, but I know there are a good many cases on record, and I know there is a book by Dr. Busey, of Washington, which might possibly throw some light on cases like the present one. We are not likely, however, I fear, to know much more about the disease until we can get an opportunity for post-mortem study.

Dr. H. R. Wharton: I saw this child when it was a few days old, and at that time the deformity was very similar to the deformity he presents now. The only change I notice is that the swellings on the dorsal surface of the feet are softer, and pit more readily on pressure. At that time the feet were as firm and tense as the legs are now. The prepuce also presented very much the same condition. The firmness was so great that I did not look upon it as an edema, but thought it was a connective tissue hypertrophy; later I thought it might have some connection with lymphatic disturbance.

Dr. Alfred Stengel: I am very glad to hear Dr. Van Harlingen express his opinion, because in reading a previous report of a case of this kind, although I had never seen one, it occurred to me that there might be a connection between this condition and the congenital elephantoid disease or lymphangiectasia described by the pathologists. An instance of the latter condition was presented beforethe Obstetrical Society by Dr. Reynolds Wilson a few years ago. The condition is not very rare, but the fetuses rarely live; they are monsters of the most pronounced type. The pathology is pretty well made out, and consists essentially in an enormous dilatation of the lymphatic spaces and channels. There is undoubtedly some occlusion of the latter, and retention of the lymph with infiltration of the tissues. A great hyperplasia of the connective tissue surrounding the dilated lymph spaces results. In external appearances the congenital elephantoid condition can hardly be likened to that before us, for in the former there are distinct cysts and a boggy stiffness due to cystic distension. But essentially I conceive that the two conditions are very much the same, the difference being only the degree of distension of the lymphatic spaces. In the case of the kind presented I can hardly see any other explanation than the one suggested. There are none of the characteristics of cardiac or renal edema, and it certainly is not in any sense allied to what we recognize as angio-neurotic edema.

Dr. W. Reynolds Wilson: I have had two occasions of reporting lesions of the subcutaneous tissues and lymph spaces. The first was the case referred to by Dr. Stengel. In that case there was an excessive dilatation of the superficial subcutaneous lymphatics to such an extent that the child presented a cystic condition, an absolute deformity which amounted to a monstrous condition. In the other case a new-born infant presented great thickening of the skin without the hardness which would be met with in scleroderma and without the evident edematous condition which is shown locally in this case. The child died, and on making sections I found, in the first place, hyperplasia of fat tissue, of connective tissue, considerable dilatation of lymph spaces and a very unusual, hitherto undescribed, hyperplasia or hypertrophy of the subcutaneous muscular system. The hyperplasia of these muscles was so great that they presented strands running across the whole of the tissue and marking off the lymph spaces in them. I had occasion to go into the subject pretty carefully, and there is no doubt that these conditions are embryonic in nature. The neurotic element is not of much importance in the study of the subject. The embryonal conditions such as these are associated in the first place with a hyperplasia of the connective tissue, with great dilatation of the lymph spaces, and also often of a hyperplasia of the fatty tissue. In looking up the subject from an embryological point of view it was made clear that the fatty tissue and the connective tissue had as a basis one form of embryonic cell tissue, and where you had a hypertrophy of one you very often had a hyperplasia of the other, so that edema occurring as in this case is possibly associated with a myxedematous condition and possibly with an increase of fatty tissue. It is possible that it is not a simple edema, but that being an embryonal affection it is associated with these other hyperplasiæ.

Dr. A. A. Eshner: I do not know that it will add very much light to the discussion to raise the question whether cases of this sort belong to the large group comprehended in the dystrophies. There are some features in the case which suggest pseudo-muscular hypertrophy, but this boy appears to possess considerable muscular vigor, and the knee-jerks are preserved. Cases of this kind, however, exhibit all degrees of severity. In some there is great loss of muscular structure, with substitution of fatty tissue, while in others the conditions are quite the reverse. A therapeutic suggestion presents itself, and that is in connection with the use of thyroid extract in a case of this sort.

Dr. C. J. Hoban: Dr. Wilson's remarks bring to mind four cases resembling his. The first was one of the lower part of the fetus; it had undergone myxedematous degeneration, and upper part sclerosed. It was a very large child. The other three cases occurred in one family; all had undergone myxedematous degeneration. The placentæ in the three cases had also undergone myxomatous degeneration and were about three times the normal size.

Dr. Jopson: Dr. Wharton's remark that when he saw the child the edema was harder than it is now, might be explained by the fact that in children edema is often of the variety known as *œdema lignea*, from the smallness of the inter-fibrillary spaces, and granting this is a simple edema we would expect it to become softer in character as the child grew older. I am glad the members agree with me that this condition is not purely nervous in origin, but that it must have some anatomical foundation. In two of Milroy's cases it was not congenital, but followed an injury. In each case the accident happened to the limb which afterward became enlarged, so that, presuming the edema is dependent upon some embryonic peculiarity of the tissues, it might be that the injury was all that was necessary to call it forth. As to its being of lymphatic origin, that is a point which we cannot decide at present. I do not think it can be purely myxomatous. With the pitting on pressure and the increase in size on standing and walking, there must be an increase in the amount of serous fluid in the limb. As to the suggestion that thyroid might be of value, it would certainly be worth a trial in these cases. I do not think we have to do with any such condition as cretinism, as intellection is good and the health in every other respect is above par. Milroy advanced the theory that the edema might be due to a congenital absence of the valves of the veins in the lower extremities. Such an anomaly must be a very rare one, and this can only go down as a suggestion.

Dr. F. A. PACKARD read a paper upon **The Treatment of Intussusception from a Medical Standpoint**, and Dr. EDWARD MARTIN read a paper on **The Treatment of Intussusception from a Surgical Standpoint**, and Dr. R. G. LECONTE read a paper on **Intussusception of the Post-Mortem Type Observed During Laparotomy.**

Dr. FREDEICK A. PACKARD said: Intussusception (aside from the agonal form) is an extremely rare affection. A case reported from the Children's Hospital of Philadelphia. It concerned a female infant, aged eight months, seen on the fifth day of the disease. Owing to the fact that the illness had existed for a time sufficiently long for adhesions to have formed and for ulceration or sloughing to have taken place, no mechanical, non-surgical treatment was adopted, but the case was transferred to the surgeon. Laparotomy was performed, the invagination reduced and two perforating ulcers sutured.

The child died three hours later.

The dangers of using injections after the third day of the disease and of employing too high a pressure at any time were dwelt upon, examples being quoted from literature. It was recommended that injections should not be used after the third day except as the preliminary step of a possible immediate laparotomy, and that the reservoir of the injection apparatus be held at a height of three feet at the outset, to be gradually elevated to eight feet, but never to exceed the latter point.

Dr. Edward Martin read a paper on "The Surgical Treatment of Intussusception," in which he stated cases of intussusception are perhaps best classified under Raffinesque's system as ultra-acute, death taking place in the first twenty-four hours; acute, terminating between the first and seventh day; and, sub-acute, lasting two weeks or upward. After discussing the etiology and pathology of intussusception, Dr. Martin stated that he has been particularly impressed with the extreme rarity of intussusception. It is usually regarded as a common affection of childhood. As far as he has been able to discover, but one case has ever been treated at the Children's Hospital of Philadelphia. Examinations of records of other institutions reveal a similar paucity of material.

Eight hundred personal letters sent out with stamped envelope to return, brought Dr. Martin only 54 cases. The great majority of these letters were answered. Men of the widest experience, both in medicine, surgery and in pediatrics, stated that they had never seen a case. His purpose in sending these letters was not primarily to demonstrate the rarity of intussusception, but rather to demonstrate its true mortality. There is a natural tendency to report only successful cases, and believing that this rendered entirely inaccurate statistics compiled from general records, he started a personal investigation, confidently expecting to have several hundred cases from which could be drawn reliable conclusions. All the statistics showed that intussusception in children is most frequent about the sixth month; that after fifth year it becomes comparatively rare until the 40th or 50th year, when it again increases in frequency of occurrence. In the first year of life the ileo-cecal form is more common than the combined form of all the others, the ileal invagination being exceedingly rare. When the ileum is involved it is usually in its lower segment. Intussusception of the colon is commonly found in the sigmoid flexure. The acute form in infants is characterized by a painful onset, commonly in the ileo-cecal or umbilical region.

There can be no question that many cases of intussusception are not recognized. It is probable that examination under ether will show a tumor in practically all cases.

The prognosis of intussusception is extremely grave. Leichtenstern places the general mortality as 73 per cent. In

73 cases collected by Hare and Martin in 1889, the mortality was 90 per cent. In the first year of life the mortality is much higher, reaching 80 per cent.; death commonly between the fourth and seventh days.

The methods of treatment to be considered are massage, rectal injections and reduction of invagination through an abdominal opening. Though massage has successful cases credited to it, it is at best a blind and usually futile measure, and one likely to do more harm than good. Injections are of incontestable value, and, in so far as statistical study goes, have been nearly as successful as has abdominal section. Injections of liquid, aside from direct surgical interference, afford the most efficient means of reducing invagination. The liquid of choice should be normal salt solution, at a temperature of 102 F. As a result of experimentation, Hare and Martin found that by a pressure of 1½ pounds. warm normal saline solution could be passed from the rectum into the stomach of a dog without interfering with its vital functions in the slightest degree, without being followed by any impairment in digestion or general health. A cold solution produced marked and immediate shock, was much slower in going through, and left the dog sick for some hours. The hot injections at 116 F. caused death from heat-stroke.

As to the method of giving forced injection this should be so directed that the pressure of the fluid should be gradual, steady and progressive. The child should be wrapped in cotton, should be thoroughly relaxed with ether, and by means of a fountain syringe normal saline solution at a temperature of 103 should be allowed to flow into the rectum at the rate of about four ounces to a minute, under a pressure at first not over two pounds to the inch, obtained by elevating the irrigating bag four feet above the level of the anus. The liquid is prevented from regurgitating by a shoulder made upon the injection pipe, by wrapping it with a narrow bandage. This treatment should be continued for not less than fifteen nor more than thirty minutes, the bag being gradually raised to a height not greater than 8 feet, and the abdomen being kneaded during the treatment. For an infant not more than three pints of fluid should be employed, and before making this attempt at disinvagination all preparations for abdominal section should be made. When injection fails, immediate coeliotomy is indicated. The median incision is best. There has never been any trouble in finding intussusception: The first effort should be directed toward accomplishing disinvagination. This is best attained by stripping back the intussuscipiens. In case of failure the modified Maunsell method is the one of choice. This consists in making a longitudinal incision in the intussusceptum, delivering through this the entering and returning folds of the intussuscipiens, removing the greater part of the tumor thus formed and restoring the continuity of the intestine by suture. A further modification of this method, and one which would lessen the danger of sewing the peritoneum and make only a short cut necessary in the intussuscipiens, consists in seizing the neck of the tumor in a clamp or ecraseur, cutting it away below, drawing the stump through the opening of the intussuscipiens and uniting the gut as in the Maunsell method. The separated and usually sloughing mass should be pushed along the bowel until it reaches the rectum, from which it could be delivered by forceps.

The case operated on by Dr. Martin was referred to by Dr. Charles Hoban. The child was seven months old and exhibited all the typical symptoms. Eight hours from the onset of attack one thorough trial at disinvagination by injection was made. This was followed by free fecal evacuation, but an abdominal tumor was still felt. Abdominal section was performed immediately; the invagination was of the ileo-cecal variety, four inches of the ileum and all of the ascending and transverse colon forming the intussuscipiens. It was reduced by a milking motion practised with both hands. Six days later the stitches were removed; the wound had completely healed and the belly was strapped. A violent attack of vomiting incident to a too free meal tore open the wound eight hours later, allowing of extrusion of the greater part of the intestines. A double line of sutures was applied and no further difficulty was experienced.

Of the 52 cases collected from private sources by Dr. Martin, the average age was 30 months. Vomiting was present in 89%, bloody, mucous evacuations in 87%, severe pain in 85%, tumor in 79% and tenesmus in 77%. Two cases were subject to medical treatment alone, both resulting fatally; two cases had no treatment, and both died; 43 were subject to intions; of these 15 were subsequently operated on. Of the

28 cases not operated on, but treated only by injection, 16 recovered; of the 15 cases operated on, 3 recovered. These figures show how high is the mortality of operative treatment.

Abstract of Dr. LECONTE'S Paper.—While performing laparotomy for a penetrating stab wound of the abdomen in a boy aged nine, three intussusceptions of the small intestine were met with. Two were direct and the other retrograde, all having the characteristics of the post-mortem type of intussusception and none of the characteristics of the obstructive invaginations occurring during life. The recovery of the patient was uneventful.

DISCUSSION.

Dr. M. PRENDERGAST: Is there no possible way of making a diagnosis between a twist in the bowel and an invagination?

Dr. C. J. HOBAN: As to the differentiation between intussusception and volvulus: I have had within the last year four cases of obstruction of the bowel between the ages of 17 and 18 months; two were cases of intussusception and one hernia through the omentum. The characteristic of the intussusception is the bloody mucus; that did not occur in the cases of volvulus or omental hernia, and I think it is the most characteristic symptom of intussusception. Moreover, tenesmus was great in cases of intussusception, more so than it was in volvulus; vomiting appears more quickly in volvulus than in the intussusception; in omental hernia the vomiting comes on more rapidly, possibly on account of the position of the obstruction.

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ABSTRACTS.

THE TREATMENT OF PERITYPHLITIS IN CHILDHOOD.

KAREWSKY (*Berlin. Klin. Wochenschr., 1897, xxxiv, No. 7, 150; No. 8, 169*). The therapeutics of this disease are still not clearly defined. The mortality of children operated on varies between 25 per cent. and 66 per cent. Sonnenburg, however, reports a mortality of only 8 per cent., the same as in adults. When we discriminate between the circumscribed and the diffuse cases, Rotter has obtained a mortality in the first of 2.5 per cent., in the latter of 66 per cent.; Sonnenburg 0.0 per cent. and 43 per cent.; Karewsky 48 per cent. and 55 per cent. The initiatory complaints in perityphlitis not infrequently are dyspeptic symptoms, and here an early resort to intestinal irrigations or to cathartics is often fatal.

An operation should be performed even in those cases in which the prognosis is grave, for even these cannot be said to be absolutely fatal. Karewsky emphatically protests against the removal of the omentum, as advocated by Baginsky, for the reason that this is unnecessary as well as dangerous; the vermiform appendix also should not be removed if it has to be searched for amongst adherent intestinal coils.

Puncture of the abscess, for diagnostic or therapeutic purposes, should not be made, on account of the danger of perforating the intestines; on the other hand, an exploration per rectum often facilitates the diagnosis.

Karewsky rather favors operating once unnecessarily than once missing an operation where it is needed, because the danger of a missed operation as against an unnecessary operation is exceedingly great. He believes, however, that in the presence of a diffuse peritonitis we should delay as much as possible before operating.

Renvers has observed 134 cases of perityphlitis in three years, of which three out of eighty-seven cases in which no operation was done, died, and ten out of forty-seven cases which were operated upon. Among the latter were five greatly complicated cases. In sixteen cases there had been over three relapses. In the presence of a peritoneal irritation, operative measures should not be undertaken. Baginsky has observed twenty-six cases of perityphlitis in 2,900 sick children at the Kaiser Friedrich Kinderkrankenhause, of which nineteen recovered without any operation, two died without and four following an operation. Baginsky has observed cases which recovered spontaneously, where an operation seemed fatal. He believes, however, that an operation is indicated as soon as circumscribed dulness, pain, fever and formation of abscess are present. Furbinger has observed 389 cases of perityphlitis in ten years, among which fifty-four were children. Of these two died with peritonitis; six were operated upon and recovered, no relapses occurring. He is not in favor of indiscriminate operation in perityphlitis. In certain cases puncture for diagnostic purposes may be very valuable, and if carefully performed, without any danger.

Sonnenburg has observed perityphlitis in thirty-seven children, of whom six died; seventeen were operated on in the first attack, which in these cases was accompanied by grave symptoms. Sonnenburg emphasizes that the passing of the attack in perityphlitis is by no means equivalent to a cure. Sonnenburg's mortality in this disease was 18-19 per cent., all of which were complicated cases. As soon as suppuration is present we must not look for a spontaneous cure; an operation alone can lead to a definite cure. The gangrenous form, which is of relatively frequent occurrence in childhood, and difficult to diagnose, cannot be cured even by an operation.

Heubner believes that Sonnenburg is inclined to look upon the diagnosis too seriously, for we quite frequently see a definite cure even without an operation. The advice is undoubtedly good: *Ubi pus, ibi evacua;* but the worst forms are frequently those in which the indications for an operation are difficult to find. Heubner's advice is to operate at once even in those cases where no swelling is present, regardless as to whether fever is present or not, as these cases have an unfavorable prognosis under all circumstances. Finally, Karewsky observes that the reason why the statistics of the surgeon are unfavorable is because the latter is only called to the worst cases; and admits also that the diagnosis of this disease in children may, during the first few days, be difficult, on account of the absence of characteristic prodromes. Karewsky, contrary to Renvers, proposes to retain the name appendicitis as a characteristic one, and favors the performance of an operation, also in diffuse purulent peritonitis, for the reason that the prognosis is very unfavorable under all circumstances.

THE LATEST POINT OF VIEW IN REGARD TO THE TEACHING OF THE ETIOLOGY AND PATHOGENESIS OF DISEASES OF THE DIGESTION IN EARLY CHILDHOOD.

SONNENBERGER (*Der Kinderarzt. 1897, viii, 153*). A paper read before the Verein Rheinhess, Aerzte at Mainz.

That diseases of digestion in early childhood form for the general practitioner a prominent and important group of diseases, may readily be recognized by the fact that about 60-70 per cent. of all deaths during the first year of life can be ascribed to diseases of the digestive apparatus. In spite of the great frequency of this disease, it is only lately that we have been able to obtain a clearer view as to its etiology and pathogenesis. The reason that the changes which occur in the digestive apparatus of the infant are assigned a special position in contradistinction to these same diseases in the adult, is based especially on the peculiarities and differences of the anatomical and physiological conditions of the organs in the period of infancy, from that of adult life, by which a marked predisposition to diseases of digestion and to a more grave and rapid course, is produced; furthermore the composition of cow's milk disposes to their frequency and severity. The quantitative composition of the former must be considered on the one hand, and on the other its qualitative condition, its bacteriological and chemical poisons. The latter have been carefully studied in late years by the author, and should be as closely considered in the etiology of digestive disorders in infancy, as the bacterial poisons, which have up to the present time received more than their share of attention. The gastric and intestinal diseases of the infant, from simple dyspepsia, to the hyperacute cholera nostras, are to be looked upon as forms of intoxications, which arise at one time from bacterial toxines—part endogenous, in part exogenous—at another from vegetable alkaloids and similar matters, which have contaminated the milk through the food of the animal; the stomach of the infant is loaded with food containing these toxines or alkaloids, but is unable, on account of the small quantity of hydrochloric acid present, and in the short time the milk remains in the stomach, to render it aseptic; it therefore enters the intestinal canal still charged with the poisons, or they are first split up by processes of disintegration into poisonous final products in the intestinal canal; through absorption we now obtain, according to the intensity and variety of the poisons, more or less grave symptoms of intoxication (vomiting, diarrhea, collapse, etc.). Specific bacteria do not seem to enter into the origin of these diseases, all milk and intestinal bacteria being able under favorable circumstances to excrete toxines, toxalbumines, etc. The heat of summer, bad sanitary conditions, etc., are equally responsible for these diseases with the poisons mentioned above. The prophylaxis of the diseases of digestion of early childhood may be summed up in the sentence: Avoid the poisons and breeders of the poison! We should above all remember that the sterilization of milk is only directed against the bacteria and does not influence the toxines already formed, nor the vegetable poisons present in the milk; therefore, besides sterilizing the milk we should be exceedingly careful in its production, especially directing our attention to a rational feeding of the animals (i. e., such a one which excludes all food containing vegetable poisons). As regards therapeutics: Remove the poisonous materials by irrigation of the stomach and the intestines, calomel; chemically changing the poison by the newer tannin preparations, especially the tannalbin; compensation of the great loss of fluid by rectal enemata, the administration of large quantities of water by the mouth, and particularly giving a diet rich in water and poor in solids (no milk, small portions of slimy food frequently, solution of egg albumin in water, black tea). Later on, slightly styptic medicines, small quantities of well diluted milk, some one of the better babies' foods, etc.

DILATATION OF THE STOMACH IN CHILDREN.

COMBY (*Therapeut. Wochenschr., 1897, iv, 695*) had already studied this subject in 1884, and was able to determine accurately the size of the stomach from eighty infants under two years of age, thus proving his previously expressed view, that dilatation of the stomach in poorly nourished infants is of frequent occurrence. Experiments have shown that a great majority of artificially fed children are afflicted more or less with a dilated stomach, which manifests itself during life by slow digestion and auto-intoxication, to which the patient succumbs. That the stomach, in a great number of these cases, does not empty itself, was demonstrated by sounding the former five to six hours after food had been taken, which process brought to light crumb-like, decomposing milk remnants, giving the reaction for sulphuretted hydrogen. On autopsy, punctate ulcerations of the mucous membrane, and dark serous coffee-grounds like products were repeatedly met with. Undoubtedly capillary hemorrhages, which manifest themselves during life in the vomiting of dark masses, are occasionally present. Hence dilatation of the stomach plays a prominent rôle in the pathology of infants, and frequently leads, either directly or indirectly, to a fatal termination.

As regards the treatment, irrigation of the stomach with a soft Nélaton catheter (Nos. 20, 22, 24, according to the age of the child) is of great service. It is very easily accomplished, is well borne by the children, rids the stomach of retained putrefying remnants, and relieves the patient exceedingly. In cases where vomiting is prominent this will cease, almost without exception, after an irrigation of the stomach.

THE CLINICAL DIAGNOSIS OF SCROFULA.

NEUMANN (*Therap. Wochenschr., 1897, iv, 668*). We are much inclined as a rule to declare every chronic disease of childhood scrofula. This is not always correct. Scrofula always rests on a tubercular basis. It presents, however, other symptoms which are not tubercular. Primarily we meet with *glandular tuberculosis.* Here it is easy to make a diagnosis of tuberculosis. It is different, however, when we come to the other glands. In the glands of the pharynx and of the palate, we need ask ourselves the question whether a primary tuberculosis of the tonsils is possible. The latter may become infected by the saliva containing bacilli; it is, however, as has lately been observed, that they may become tubercular primarily.

In *scrofulosis of the bronchial glands,* bronchial breathing is heard between the second and fourth vertebræ, extending to the right and may also be heard over the scapula and in the right supraclavicular depression. When the mediastinal glands are affected, it may perhaps also be heard over the sternum. Percussion is negative posteriorly; anteriorly, on the right side above from compression of the lung the percussion sound will be clear and tympanitic.

In one-third of the cases of scrofulosis of the bronchial glands and in one-half of all the cases of scrofulosis of the lymphatics of the neck,. a hypertrophy of the lymphatic tissue of the pharynx will be found, produced possibly by a damming of the lymph.

This is a most important distal symptom. As a rule the palatal and pharyngeal tonsil is enlarged, but not always in like proportion. This swelling is the cause of the enlargement of the tonsils. This tonsillar enlargement acts deleteriously on neighboring organs, for example on the ear. An otitis occurring in such a patient runs a grave course, with frequent relapses. Engorgement of the mucous membrane of the nose may also occur. Changes will take place in the bony structure of the face. The palate becomes high and narrow, the alveolar ridge shortened, the permanent teeth turned out of their axis. Another frequently present change in the teeth is a discoloration which takes place in the milk-teeth, and a gradual shallow caries.

The symptoms of scrofulosis, as far as the skin and the mucous membranes are involved, are always to be sought for in the face. We must not, however, mistake all forms of diseases of the skin and of the mucous membranes for scrofulosis. Chronic eczemas and inflammations may be caused by parasites or by foreign bodies. Seborrheic eczema, impetigo contagiosa, lichen-ruber, and eczema facialis, which is probably dependent on feeding, are diseases *sui generis*, and frequently confounded with scrofulosis.

The first period, in time, of scrofulosis continues to the fourth year of life. Infection with tubercle bacilli is, as a rule, scrofuloderma. The second period, up to the eight year of life, constitutes the florid period of eczema. During the third period, up to fourteen years of age, eczema declines.

Among the objective symptoms fever is of great importance. Commonly it is accepted that febrile symptoms only make their appearance when pus is present (Leichtenstern). N.'s own observations have convinced him, however, that fever is usually present in simple glandular scrofula. In more than sixty-two per cent. of the cases was this demonstrated. The temperature should, however, be taken in the rectum, and the thermometer allowed to remain there a sufficient length of time; a temperature above 37.7 degrees is considered as indicating fever. Finally heredity must also be taken into account where all other methods of examination do not lead to a definite diagnosis. Even in those cases where the symptoms cease after the removal of adenoid vegetations. He considers scrofulosis to be present.

TREATMENT OF CHOREA BY MASSAGE.

Fedorow (*ibid., p. 713*) reports five cases in girls seven to fourteen years of age treated satisfactorily with massage and gymnastics. The etiology was unknown in three cases, in another fright, and in one psychic infection from a sister, were demonstrated as causes. All the patients were anemic, badly nourished, but had previously been healthy. Internal organs were normal. The treatment consisted in tub-baths of 27° R.; in some cases iron and arsenic was administered, and with this a general massage of the whole body. In three to four days the choreic movements became weaker; in one severe case only was improvement delayed for four weeks. After the symptoms began to improve, passive gymnastics—flexion and extension of the extremities and of the head—were practised. Recovery took place within two to six weeks, in more severe cases after two and a half months. Contraindications to this method of treatment are acute polyarthritis, great valvular disease of the heart, etc. The good effects of massage can probably be referred to a lowering of the irritability of the cortex of the brain, by the slight irritation of the peripheral nerves. In chorea following infectious diseases it may be due to an improvement of the circulation, and an increase of metabolism with resulting rapid excretion of the toxines circulating in the system.

DERMATITIS EXFOLIATIVA IN INFANTS.

Winternitz (*Verein Deutscher Aerzte in Prag, ibid, 717*) has studied three cases of dermatitis exfoliativa in infants from a histological and bacteriological point of view. One case ran its course with a high fever, a symptom not usually observed in these cases. It may be that this phenomenon should be referred to some complication, as the child presented symptoms of gastroenteritis. A bacteriological examination of the blood resulted in pure cultures of the staphylococcus aureus and albus. After recovery the examination of the blood of one of the children for bacteria was negative. As regards the histological examination, portions of the skin of dead as well as of living children were examined. The changes—extensive loss of epithelium, inflammatory edema and cell-infiltration of the corion—proved to be the same as found in pemphigus.

SHOULD ADENOID VEGETATIONS BE REMOVED WITH OR WITHOUT CHLOROFORM NARCOSIS?

M. Hagedorn (*Centralbl. f. Kinderheilk., 1897, ii, 187*) at the present time always performs the operation under chloroform narcosis, and strenuously condemns its performance without the latter. The removal of adenoid vegetations is as a rule quite painful, and if the child is not anesthetized it will frequently be made permanently nervous from the great excitement and agony of the operation. In H.'s experience children thus operated on have for weeks and months afterward trembled at the mention of the operator. To-day, when nervousness and neurasthenia are so frequently met with in childhood, we should avoid all such excitation. Another difficulty is that of firmly fixing the head of the patient, and the rarity of being able at one sitting to remove all the growths, thus frequently leading to their recurrence within one and a half to two years.

All this may be avoided by chloroform anesthesia—ethyl bromide did not give satisfactory results in H.'s hands—from which we need not fear dangerous symptoms. Children are readily brought under the influence of chloroform—H., as a rule, used only three to four g—they generally bear it well, as it is not necessary to fully narcotize them for this operation, but the latter may be proceeded with as soon as the corneal reflex is abolished. The danger of blood or portions of the growths entering the larynx may easily be avoided by lowering the head during the operation. This position may be employed with advantage while operating; the bleeding is not greater than in the erect position. In this way all diseased tissue may be removed, and a recurrence is very rare. To make assurance doubly sure, however, H. insists on the insufflation of xeroform into both nostrils, mornings and evenings, for several months; the finely divided powder at first removes the chronic nasal catarrh which is usually present, and then, by entering the naso-pharyngeal cavity, exerts its astringent and desiccating qualities on the former seat of the adenoids, thus greatly antagonizing their recurrence. Enlarged tonsils may also be removed at the same time; this, however, will only be necessary where they are greatly enlarged, as slightly enlarged tonsils, as has been frequently observed by H., will spontaneously diminish after scraping the naso-pharyngeal cavity.

ORGANIC DISEASE DUE TO SLIGHT VEGETATIONS IN THE NASO-PHARYNGEAL CAVITY.

G. Zimmermann (*Jahrb. f. Kinderheilk., 1897, xliv, 2*) does not speak of those fully developed cases of adenoid growths which fill the whole naso-pharyngeal space, and give rise to the well known characteristic symptoms, but of quite small vegetations on the roof of the pharynx, which may be the cause of quite appreciable disturbances in distant organs. At times the shape of the pharyngeal tonsil is in so far maintained that we recognize an irregular swelling with longtitudinal furrows; again, individual portions especially show exuberant growth, so that peg and coxcomb-like excrescenses have resulted. At no time, however, are these vegetations so extensive that they overtop the upper border of the choanæ. The vomer is always clearly to be seen. Thus nasal respiration and the voice may be normal, and all other symptoms be absent. Nevertheless these vegetations, which seem rather unimportant as observed by the throat-mirror, may consist of a relative voluminous mass, and possess quite a large diameter. As these growths are very apt to be overlooked in a superficial examination, the diseases caused by them, which may appear in the ear, the respiratory tract and the nervous system, are frequently looked upon by the physician as primary. Of ear affections, we may mention chronic suppuration, tubal and middle ear catarrh, which prove exceedingly refractory, and only disappear fully after these small vegetations have been discovered and removed, and which, though they may not have interfered with nasal respiration, still directly or indirectly occluded the entrance of the Eustachian tubes, and in this manner prevented the ventilation of the middle ear.

Of especial interest are the disturbances of the respiratory tract, above all a form of rhinitis, which Z. designates as "intermittent" or "relapsing." The little patients are again and again subject to coryza, which usually begins with greater intensity than a common catarrh; headache and nasal occlusion are more violent, the fever higher, the secretion more profuse, the course slower; rarely is there absence of glandular swelling at the angle of the lower jaw in the region where the lymphatics of the naso-pharyngeal space enter. This fissured tissue on the roof of the pharynx forms an especially favorable soil for the development of chronic inflammatory processes. Suppurating follicles are always found; in short, here may be developed, as in a damp closet, all kinds of pathogenic germs, which lead to other diseases. These are at once cured on removal of the vegetations. If this is not done, a typical chronic rhinitis with permanent hypertrophies may result from the continued relapses. Should this condition obtain in children who live in bad hygienic surroundings, and whose noses are not well attended to, excoriations and infiltrations occur at the nasal entrance, upper lip, etc., the lymphatic glands become enlarged, and the aspect of scrofula may arise. To differentiate such cases, as being due to adenoid vegetations, is of course very important. Occasionally this process may extend still deeper. The so-called nervous cough is frequently only a reflex due to aspirated particles of mucus dropping down from the naso-pharyngeal space. This mucus may occasionally, according to its more or less infectious quality in all probability, cause a true catarrhal inflammation. Follicular pharyngitis, and especially pharyngitis sicca, may often be traced to this cause, as may also some forms of bronchitis, in which case the rapid change of the symptoms and the tendency to relapse is remarkable.

CONTRIBUTION TO THE PATHOLOGY OF DIARRHEAL DISEASES IN CHILDREN.

A. BAGINSKY (*Berl. Klin. Wochenschrift, 1897, xxxiv, 506*). The following conclusions are arrived at by B. from a minute study of fifty cases of diarrhea in children, both bacteriological and pathologico-anatomical:

1. The diarrheal diseases of children which make their appearance in conjunction with the high temperature of summer are in the beginning undoubtedly functional (chemical) disturbances; in their further course, however, they are due to grave lesions of the wall of the intestine, in which not specific but the common (saprophytic) bacteria of the intestinal contents act as disease producers.

2. These bacteria either cause injury to the intestinal mucous membrane by products of putrefaction, which may be non-poisonous, but are usually of a toxic nature (NH_3 and its derivatives), which excite inflammation, or else they cause a disintegration through the blood and lymphatic vessels, of the vegetative and of the most important excretory organs (liver, kidneys, etc.).

3. The organism is given over to the invasion of inimical microbes of all kinds (staphylococci, streptococci, pneumococci, oidium albicans, etc.), by the disturbance of nutrition and the diminished power of resistance of the tissue so caused. A predisposition to disease which exhibits itself in various complications is thus produced.

THE TREATMENT OF ECZEMA.

PEZZOLI (*Therap. Wochenschr., 1897, iv, 677*): Every one who makes a study of skin diseases will admit the difficulty of a scientific treatment of eczema. This difficulty consists particularly in recognizing in what stage the disease is at the time of presentation, and how the various remedies which are recommended in this disease act, so as to be able to gauge in advance the effect which we wish to obtain and later on to estimate it properly. This knowledge is particularly necessary in the use of tarry substances, which frequently produce extraordinarily happy results, but where wrongly applied may cause great injury. A preparation, according to Pezzoli, which possesses all the advantages of tar, without its drawbacks, is *naftalan*. This remedy, which is procured by distilling crude naphtha from the region of the Caucasus, and which has been well known for some time to the inhabitants of this region, on account of its great healing properties, occurs in the form of a grayish-black ointment of a semi-solid consistency and is perfectly odorless. On account of its high melting point it does not liquify at any bodily temperature, nor during the greatest heat of summer it does not become rancid. The clothing is not permanently stained. Pezzoli has employed naftalan in ninety-two cases of the most various skin diseases, and nearly always obtained good results. This ointment gave most satisfaction in the treatment of eczema. All stages of this disease were favorably influenced, the secretion in the weeping stage of eczema disappeared in a few days, the scaling ceased in the chronic cases, and the formation of papules and the infiltration of the integument diminished. The ointment was found of especial service in impetiginous eczema, of the scalp as well as of the face, in children. Naftalan was also used in the various forms of dermatomykoses, as herpes tonsurans of the hairy scalp as well as of the trunk, in sycosis parasitica, pityriasis versicolor and erythrasma, and good results obtained. In scabies also, naftalan acted extraordinarily well, an inunction of the latter from one to three times being sufficient to destroy the acarus Schoenleinii, and to remove all complicating symptoms of eczema. Pezzoli therefore argues that naftalan will prove a very welcome addition to the therapeutics of the skin, simplifying to a great extent the treatment of all skin affections, but being particularly useful in all forms of eczema.

MYXOMA GLANDULÆ THYMUS IN A YOUNG INFANT.

N. F. Winogradow (*Wien. Klin. Wochenschr., 1897, x, 656*). After a general survey of the descriptive and topographical anatomy, and the histology of the normal thymus gland, the author describes a tumor of this organ which has not been mentioned up to the present time. A robust male child one and a half months old was taken ill with capillary bronchitis and died after one week's illness with symptoms of violent dyspnea and cyanosis, Remarkable points were, a chicken-breast, great dulness, and uncertain respiratory murmur below the clavicles, crepitating râles, corresponding to the site of the right scapula; the signs of consolidation increased more and more towards the end. An anatomical examination presented general cyanosis, passive hyperemia of the brain, the spleen and the liver, the latter being of the nutmeg variety; both organs were dislocated downwards; the other abdominal organs were normal.

A tumor, closely hugging the sternum and the ribs, wholly covering the pericardium and the lungs, extending upwards to the jugular vein and downwards to the ensiform cartilage, pushing the diaphragm downwards, was found. The tumor was adherent by loose connective tissue to all neighboring organs, and was easily shelled out in its entirety. The heart was pushed downward, dilated, the foramen ovale closed, the great arteries, as also the cava superior and the tena anonyma, elongated and narrowed. The trachea was somewhat compressed at the upper portion of the chest; the lungs were compressed pale and showed alelectasis with slight hypostasias, there were no foci of consolidation in the lower lobes; the pleura was intact. The phrenic nerves were elongated and overlapped by the tumor.

The tumor itself was of an oval form, somewhat flattened, 10 cm. long, 8 cm. broad and 6 cm. in thickness; it weighed 1,820 g. It had an indistinctly fluctuating feel; at one point behind it was somewhat firmer, and inclosed in a fibrous capsule two or three mm. in thickness, which was adherent only at its posterior periphery to the tumor; otherwise the capsule was not adherent, its inner surface was smooth, shining like a serous membrane; between it and the tumor was found some bloody serum. Deep anastamosing furrows gave to the surface of the tumor, which is covered with a fine network of vessels, the appearance of a brain after removal of the pia. Its color was a whitish gray, its consistence gelatinous. The contents of the tumor easily flowed out on incision or puncture, and may be drawn out in threads.

The tumor itself consisted of a transparent, homogeneous substance, which gave a reaction for mucus, and was in part traversed by fine, straight or convoluted fibers. In the substance were found sparse, irregularly distributed, round and spindle-shaped cells; also large cells having prolongations filled with a granular protoplasm and double walled nuclei, those stained with safranin showing distinct nuclear figures. The main substance also contained very thin vessels frequently consisting only of endothelial layers of broad caliber packed with red blood corpuscles. The tumor also inclosed small islets of normal thymus tissue in their interior and also in their vicinity containing distinct corpuscles of Hassal.

The tumor must be looked upon as a myxoma hyalinum s. gelatinosum, which, arising from the stroma of the thymus, gradually absorbed the normal tissue with the exception of small portions. On account of the immense size of the tumor and the young age of the child the author is inclined to look upon it as congenital. It is of clinical interest that grave symptoms were present long before the advent of bronchitis, as we know that enlargements of the thymus of much less degree have produced asphyxia. The slow growth and softness of the tumor probably account for its non-occurrence (which obviously only exerted pressure on the sternum and the yielding cartilages of the ribs, and in this manner produced the chicken-breast). Rhachitis could not be demonstrated either clinically nor anatomically.

ON ANTISTREPTOCOCCUS SERUM.

Petruschky (*Ztschr. f. Hyg. u. Infections krankh., 1896, xxii, 485*) repeated the experiments of Marmorek made in the spring of 1895 with antistreptococcus serum. For this purpose he employed one specimen of serum made at the serum factory of Lyons, and two obtained from the Pasteur Institute; one of the latter, together with a culture of streptococci, had been sent to him by Marmorek himself. He obtained negative results. He found that the dose of a hundred-millionth cubic centimeter was not, as reported by Marmorek, the positive lethal dose for rabbits, but caused death only exceptionally. The results as regards the degree of virulence of streptococci cultures as obtained by Marmorek were not new. Immunity against streptococci infection in the rabbit was not obtained from any of these specimens, so that it cannot by any means be recommended for therapeutical experiment in the human being. A positive proof of the success of serum treatment in streptococcus infection has up to the present time not been obtained.

A FEW WORDS ON THE NURSING OF CHILDREN HAVING DIPHTHERIA.

THOMAS (*Der Kinderarzt, 1897, viii, 10*). The author does not believe that the treatment with antitoxine injection alone is sufficient, but recommends as well the carrying out of all rules of general therapeutics in vogue before antitoxine treatment was employed. It is necessary in the first place to administer a roborant diet. The cleansing of the mouth and nose with a 1 to 2 per cent. solution of salicylic acid is to be recommended, it being of great value for the removal of secretion and pseudomembranes. A bath of lukewarm water also should be administered, for the preservation of the function of the skin is of great importance. The diet of a child suffering with diphtheria is at all times an important problem, as it frequently happens that children will not eat or drink for days together, and occasionally a case is met with which dies for want of food, although the disease has been cured.

Finally, as the after effects of serum therapy frequently cause some anxiety, it devolves on us especially to feed the children mainly with milk during the first few days, on account of the danger of the occurrence of nephritis. As most children who are fed on milk in scarlatina escape an attack of nephritis, this measure should be also brought into use in diphtheria. It insures the normal action of the kidneys, and represents at the same time an adequate nourishment. Metabolism is accelerated by treatment with serum. Dr. Valette has shown that the urates and phosphoric acid are greatly increased. It stands to reason, however, that we should endeavor to diminish as much as possible the work of the kidneys.

CONTRIBUTION TO THE LAW OF HEREDITY OF TUBERCULOSIS.

WOLFF (*Munch. Med. Wochenschr., 1896, xliii, 941*). The author points out with great force to what great a degree hereditary factors influence tuberculous disease, and that in the absence of the former only very grave causes will bring on the disease. Should tuberculosis be found among a great number of children having *the same* mother, the heredity is not on the latter's side; if the youngest children are attacked by tuberculosis, both parents seemingly remaining well, suspicion points to heredity through the mother; if the oldest of a large number of children contract it, the father is to be considered the hereditary cause.

In phthisical families infant mortality is with few exceptions very large.

Malignant neoplasms, and especially cancer, make their appearance in tuberculous families with such obvious frequency that it is impossible to attribute it to chance. The author, for example, found the cause of the death of parents among 454 patients in thirty-seven cases to be "some malignant growth." Psychoses and grave diseases of the spinal cord, as well as neoplasms, occur with relative frequency in tuberculous families. It seems that tuberculosis and psychoses must be looked upon in many cases as an expression of the same constitutional vice. The smaller the hereditary taint is, the greater must be the injury to give rise to a tuberculosis, and the more favorable are the chances of an ultimate cure.

PRACTICAL NOTES.

Whooping-Cough.—Dr. Arthur H. Bigg recommends the use of *biniodid of mercury* to be given in a powder, $\frac{1}{200}$ grain in a child four years old, every two hours.—*Physician & Surgeon, Aug., 1897.*

A. Goldenhammer has had good results in several cases of whooping-cough in which he used *guaiacol.—Med. Rec., Oct. 23, 1897.*

Tussol in doses of $\frac{1}{6}$ grain for an infant one month old, to eight grains in a child of five years, is also recommended. It may be administered in raspberry sirup one to three times daily.—*N. Y. Med. News, Jan. 8, 1898.*

Enquinin, a new substitute for quinin, has also been used with success.—*F. Am. Med. Ass., Jan. 1, 1898.*

Acute Cold.—

1. ℞ Tr. Iodin.
Spir. Camphor.
Chloroform, āā ℥ 1.
M. Sig.—Inhale from bottle.

2. ℞ Menthol, 2 parts.
Chloroform, 20 parts.

Inhale 4-6 drops from the palm of hand 2-3 times a day.—*Med. Times, Jan., 1898.*

Blepheritis Marginalis.—S. C. Ayers recommends the use of hydrogen peroxid applied with a bit of cotton, to soften the crusts along the lashes. Strong solutions cause pain if they come in contact with the conjunctiva, but a one-half dilution of the ordinary twelve volume strength may be safely used in the home treatment.—*Cincin. Clinic-Lancet, Oct. 23, 1897.*

Gelatin as a Hemostatic.—Carnot uses a solution of gelatin as a hemostatic. A five-tenth per cent. solution of gelatin in normal salt solution, sterilized, by heating to 100° C. for fifteen minutes on two successive days, injected into the nasal cavity, will stop bleeding from the nose in a few minutes. The solution should be the temperature of the body.—*Med. News, Jan. 1, 1898.*

Turpentin in Scarlet Fever.—Turpentin, given hypodermically or by mouth, is said by Isidore Pujador Y. Fauva, to prevent nephritis in scarlet fever; it should not be used in doses greater than one gram for young children, and the digestive organs should be watched. If necessary the drug should be suspended for two days, and saline laxatives given.—*Am. Jour. Med. Scien., Jan., 1898.*

Pseudoleukemia treated with calomel. De Semo reported very favorable results from the use of very small doses of calomel in twenty cases of pseudoleukemia or infantile splenic anemia.—*Jour. Am. Med. Ass., Jan. 1, 1898.*

Formalin Gelatin in Suppurating Wounds.—E. M. Foote (*Am. Jour. of Surgery and Gynecology*) says, as the result of forty-five cases treated by formalin gelatin, that the formalin seems to control the infection for two days, rather than to render the wound sterile. The method is an advance over usual treatment of abscesses, as (1) the gain made in the two days is maintained, and (2) it does away with the necessity for drainage. Sheets of moist gelatin, after exposure to formalin fumes, are ground to a coarse powder, which is used with dry dressing, the abscess being first cleansed of pus and sloughing tissue, and hemorrhage stopped by pressure with dry gauze. Formalin causes more or less pain for four to six hours.

Broncho-pneumonia of Infants.—

℞	Lactophenini	0.15
	Acid benzoic	0.05

D. tal dos.
S.—One powder every four hours in hot tea.

Serum Therapy.—Experiments with serum therapy in a number of the infectious diseases have been made recently. Weisbecker last year obtained very good results in four children suffering with broncho-pneumonia during measles, by injecting subcutaneously the blood-serum taken from measle convalescents. He applied this same therapy to children suffering with typhoid fever, to five children with scarlet fever, and to five cases of pneumonia, amongst whom were two children of two and four years of age. He always employed the serum from convalescents from the same disease as that from which the patient was suffering. Each one of the patients received only one injection of ten cc. of serum, and the effect was marked in every case. Sometimes it would lower the temperature and render the local symptoms milder, at others it would increase the intensity of the symptoms, but always caused a feeling of well-being, which made itself felt a few minutes after the injection and continued to the end of the disease, so that euphoria existed in spite of high fever, and the appetite remained good. In several of the patients the duration of the disease was noticeably shortened, and all of them recovered.—*La Sem. Méd.*

Burns.—In burns, Bardeleben recommends bismuth amylum. He has made for him bandages impregnated with bismuth, to have them ready in case of need. When necessary, disinfection of the burn may be neglected; but blebs are to be removed. By applying these bandages, which are easily unrolled and impregnated with disinfectants, the pain is readily controlled and a proper treatment of the wound instituted at once. One or more layers of absorbent cotton complete the dressing. The latter must be renewed when saturated with secretion; the layers of bandage should remain untouched, if possible, for six to eight days. Occasionally we may obtain complete healing from the application of one bandage.—*Deutsch. Med. Woch.*

A Unique Course Taken by Vaccination is published by CH. F. SUTTON in *The Lancet.* He vaccinated a child with bovine virus and the vaccination took its regular course, leaving four normal scars. The whole process of pustulation and desiccation was repeated in April, the beginning of June, the end of July and the beginning of October, and each time the course was such that persons who saw the child for the first time were compelled to believe that it had been vaccinated afresh.

A Case of Lichen Ruber in a child nine months of age was reported by Th. MAYER to the Berlin Dermatological Society. The child presented, after an attack of gastroenteritis, red macules and papules, which appeared first in the gluteal region and then on the posterior surface of the thighs. These soon turned into vesicles. Their contents became turbid and an ulcer then appeared. At the present time they present spots and lines, forming conformations of extraordinary symmetry. An examination of the most recent eruption shows small, slightly shining, somewhat infiltrated nodules possessing a polygonal outline and a slight indentation. They lie close to each other, like pearls on a string. Itching is only slight. Lichen ruber at this age is a very rare occurrence.

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DR. JOSEPH O'DWYER.

PEDIATRICS

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JOSEPH O'DWYER, M.D.

DR. Joseph O'Dwyer died at his home, 967 Lexington avenue, New York, on the seventh day of January, 1898. He was only fifty-six years old. He was born in Cleveland, O., October 12, 1841, received his medical education at the College of Physicians and Surgeons, of New York, and graduated in 1866. At the time of his death he was a member of the Medical Society of the County of New York and of the New York Academy of Medicine, Professor of the Diseases of Children in the New York Postgraduate School and Hospital, consulting physician to the Willard Parker Hospital, and visiting physician to the St. Vincent Hospital and to the New York Foundling Hospital.

His connection since 1873 with the latter institution afforded him the opportunity for carrying on the best part of his great life work, the evolution of which he recorded in his presidential address before the American Pediatric Society in its meeting at Montreal, May 25, 1896. It is published in the Society's Transactions of 1896.

From 1880 to 1885 he thought, experimented, labored and improved incessantly. Not being acquainted with the previous attempts by Dessault, Dieffenbach, Horace Green and Loiseau at reaching the larynx and trachea, and with the ill received and rejected "tubage" of Bouchut's as far back as 1858, he had to find his own way, often discouraged, but always hopeful. His first reports in 1885 covered the results obtained in fifty-five acute cases; but at that early time he suggested what afterwards proved true: that intubation offered the best chance of success in the treatment of many chronic stenoses. Indeed, at the International Congress of Washington and of Berlin he could present successful cases of intubation performed both in acute and in chronic laryngeal obstructions. A case of "congenital stenosis of the larynx" was reported by him to the American Pediatric Society, at Washington, May 4, 1897. It appeared after his death, in the January number of the *Archives of Pediatrics*, 1898.

His first publications on intubation of the larynx in croup saw the light in the New York *Medical Journal* of 1885. They were followed by others in the New York *Medical Record* of 1886. But it was only at and since the meeting of the Medical Society of the State of New York in 1887 that his labors were appreciated at their full value. Shortly after, the stated meeting of the New York Academy of Medicine of June 2, 1887, was arranged for the reading of papers on intubation in croup by Dr. O'Dwyer and others who had ample experience with it. They were accompanied with an array of many hundreds of well observed cases, and established the claim of intubation as "one of the great advances of medical discoveries." The President of the Academy could at that time predict for O'Dwyer's procedure a safe permanency, and for him everlasting fame.

This prophecy has come true. After some hesitation in many foreign countries intubation has conquered its place to such an extent that tracheotomy in croup is, at present, but rarely performed. Amongst the many good and true medical men who have earned a national and international reputation there is none in modern times whose name will more certainly be forever connected with the history of the art of healing croup, than that of O'Dwyer. He never claimed a position as a universal scientist of high rank, or as a great public teacher; but he set his sympathetic heart and his ingenuous brain to work upon the task of saving suffocating infants and children—and succeeded. Indeed, nobody's labor and teaching have been so instrumental in saving thousands from imminent death like those of O'Dwyer's. It is safe to say that no American name has been so often and so approvingly quoted in the recent medical literature of the world as his. More: Whenever the records of diphtheria will be written up, there will be four names at the head of those who deserve the places of honor, Bretonneau, Trousseau, Behring and O'Dwyer.

They have scattered much of the terror inspired by the very name of diphtheria. No disregard of historical studies too common amongst us will ever efface the name of Joseph O'Dwyer from the memory of medical men all over the world. It will be one of those of whom Americans will have reason to be most proud.

"Is life worth living?" That question has often been asked, and has been answered in different ways. It is true, individual life is of some value to somebody, if only to the possessor. In a broader sense, and in the intellectual world, only those lives should be considered worth living, that prove to be of universal benefit and are apt to teach lessons.

O'Dwyer's life and work are apt to teach two lessons.

To him renown came, though he never claimed all his lifetime to be anything but a general practitioner. He never thought of raising the flag of any specialism either for the sake of money or of repute. The latter came through his work, which was earnest, enthusiastic and persistent. Never was a man more so, nor more modest, unassuming, even retiring.

He worked many years in silence if not in secrecy, before daring or consenting to make public either his labors or his successes; when he finally spoke, fame came to him such as any man may covet. Let those who rush into print before they have anything to say, and are disappointed when they never attain undeserved celebrity, heed his example. Fleeting notoriety may be snatched by push and clamor, permanent glory is attained only by earnest, honest, modest labor such as O'Dwyer's.

A. JACOBI.

ORIGINAL ARTICLES.

THE PATHOLOGICAL CHANGES IN THE MIDDLE EAR OCCURRING DURING MEASLES AND THE CLINICAL FEATURES OF THESE CASES.—REPORT OF A CASE.*

By Adolph O. Pfingst, M. D.,
Louisville, Kentucky,

Visiting Ophthalmologist, Aurist and Laryngologist to the Louisville City Hospital; Director in the Bacteriological Laboratory in the Louisville Medical College, etc.

THE subject of my paper suggested itself to me through a recent case seen in consultation, in which otorrhea with very obscure symptoms developed during measles.

A girl, six years old, previously healthy, went through an ordinary attack of measles. When the eruption had about disappeared the child suddenly developed high fever. Without a previous chill the temperature went up to 105° F. in the afternoon. It fell to 102° on the next morning but, notwithstanding the administration of antipyretics, again reached 105° F. in the afternoon. The child was bright and complained of no pain or discomfort. In consequence an expectant treatment was instituted by the attending physician (to whom I am indebted for this part of my information) to await the development of some complication. After waiting three days without a fall of temperature or the development of symptons, it was decided to have the drum of the ear examined, especially as close questioning of the mother elicited the information that upon the day previous to the sudden rise in temperature the patient had momentarily complained of a slight pain in the left ear. The complaint was so mild that it was not given a further thought by the mother. A diminution of hearing had not been observed.

When I saw the child, upon the afternoon of the third day of the high fever, she was sitting up in bed playing, and, but for the temperature, did not make the impression of being ill. Examination of the drums showed both to be reddened, not excessively so, and bulging distinctly behind and below the manubrium. The center of the bulging portion appeared yellow as if about to break. The hearing on both sides (for watch) was diminished to $\frac{4}{30}$.

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* Read at semi-annual meeting of the Mitchell District Medical Society, held at West Baden, Ind., Dec. 27-29, 1897.

As spontaneous rupture appeared inevitable, I decided not to incise the drum but to poultice and wait, at least until morning, for spontaneous rupture. During the night both membranes ruptured and when seen on the following morning were freely discharging a yellow, creamy pus. The maximum of temperature on this day was 103° F. which on the subsequent days gradually returned to normal.

The treatment consisted of the application of heat by means of flaxseed poultices, and frequent but gentle irrigation of the ear canal with a warm solution of permanganate of potash (teaspoonful of a saturated solution to a pint of distilled water) the nurse being instructed not to elevate the reservoir of the syringe higher than several inches above the ears. The discharge gradually subsided and in two weeks had ceased entirely, the defects in the drums closing.

This case serves to demonstrate how otitis media may develop almost without a sympton during measles. Outside of an insignificant ache in one ear of momentary duration there was only the elevated temperature to lead to a diagnosis in this case.

In a recent publication of Prof. Bezold, of Munich, (*Zeitschrift f. Ohrenheilkunde*, *Bd. xxviii*) in which he compiled all of the lethal cases of measles that could be found in literature in which dissection of the middle ear had been made, he came to the conclusion that the absence of pain, in fact the absence of all symptoms, save a diminution of the hearing, characterizes middle-ear suppurations following measles. As the process in the majority of instances does not lead to spontaneous rupture of the drum but terminates by a subsidence of the inflammation and absorption of the exudate, these cases in consequence of the absence of symptoms often go along unobserved. Sometimes where pain is present, it is referred to other parts (teeth or throat). More frequently than pain, a sensation of fulness and weight is experienced in the ear.

Besides the cases tabulated, Bezold made original investigations on this subject. He examined the tympanum of eighteen children who had succumbed to measles. In five of this number a discharge of pus from the ear had been observed during life, while the remaining thirteen showed upon careful examination, as the only evidence of an ear complication, the depreciation in function. In a few instances a livid condition of the drum membrane indicated an abnormality. In order to make his results as accurate and convincing as possible, the author selected the ear showing by subjective and objective examination, the least indication of a complication. Where both sides were dissected pus was found in both.

The autopsies revealed a most interesting condition, viz.: in every case the tympanum contained an exudate in sufficient quantity to be seen with the naked eye, usually filling the entire cavity. The exudate was made up principally of pus cells and fibrin, and always contained one or other of the pyogenic bacteria, the streptococcus being by far most frequently present. The Staphylococcus pyogenes albus was also frequently found. The mucous membrane was reddened in irregular areas or blotches, and was considerably swollen. The Eustachian tube was often swollen and reddened, but only in a few instances contained pus.

Of the other published autopsies upon similar cases, seventeen were reported by Tobeitz (*Archiv. fur Kinderheilkunde, 1887*), two by Moos (*Zeitschrift fur Ohrenheilkunde Bd. 18*) and seven by Habermann (*Schwartze's Handbuch der Ohrenheilkunde Bd. 1, p. 261*). In every instance a redness and swelling of the tympanic mucous membrane was noted, and the cavity contained a visible exudate.

Much doubt exists as to the manner in which the purulent inflammation is propagated in these cases, and various theories have been suggested, all of which, however, are mere assumptions. Some authors (Wagenhauser and others) express the belief that the inflammation extends along the mucous membrane of the Eustachian tube from the naso-pharynx, basing the theory upon the favorable circumstance that in measles an inflammation and hypersecretion in the naso-pharynx is a constant condition.

Tobeitz, Bezold and others look upon the involvement of the mucous membrane of the ear as an independent condition identical with the affection of the skin, and of the other mucous membranes (conjunctiva, nose and bowels).

Looking at the etiology from a bacteriological standpoint, it would seem more probable that the infection of the ear originated in the naso-pharynx which is known to harbor pyogenic organisms in greater or less proportions during measles. The circumstance that the tube is usually free from pus would indicate an infrequent extension by continuity along the mucous membrane, and rather that the septic material from the nose is carried into the ears by currents of air during coughing, sneezing, crying or blowing of the nose.

From a topographical standpoint, the impermeable condition of the nose in consequence of the inflamed and swollen condition of its mucous membrane during measles, and the comparative width of the Eustachian tube in childhood, would also favor this mode of extension.

Even were the specific germ of measles known, which is not the case, and the rash upon the skin and the inflammations of the tympanic mucous membrane accounted for in its conduction to these parts by the blood or lymph, the presence of the pyogenic organisms could hardly be accounted for in this way. It is very probable that the inflammation of the mucous membrane, brought about, no doubt, in the same way as the inflammation of the other mucous membranes and the skin, is the primary affection of the ear, and that the pyogenic organisms, finding, by virtue of the increased blood supply induced by the inflammation, favorable conditions of environment, develop and produce pus.

Summing up the results of all the autopsies—44 in number—we learn,—

First:—That severe cases of measles rarely if ever run their course without involvement of the middle ear, probably of both sides.

Second:—That the inflammatory process usually runs its course without subjective and often without objective symptoms, and only now and then leads to spontaneous perforation of the drum.

We should, therefore, in treating measles always inform ourselves of the condition and function of the ear before urgent symptoms arise. The complication is certainly overlooked frequently in young children who are unable to define the seat and character of pain or its severity. But also in older children the diminution of function is overlooked, as their power of observation is often not developed and they are not able to localize feelings. The attendants are furthermore apt to interpret the blunted power of hearing as an apparent diminution due merely to inattention of the child.

Henoch, in his "*Vorlesungen uber Kinderkrankheiten, 1895, p. 689*," says: "If fever continues in measles without an apparent cause, a careful examination of the ear should always be made, as caries, deafness and other sequelæ are often seen which can be traced to neglected cases of otitis".

THE TREATMENT OF ATHREPSIA.

By W. Thornton Parker, M.D.,

Groveland, Mass.

IN an address delivered by Dr. Haggard, of Tennessee, at the meeting of the American Medical Association, in St. Louis, in 1886, he stated that from "one-fourth to one-third of the human family die under five years of age."

This great mortality of childhood is unquestionably a reproach upon civilization. It is beyond a doubt unreasonably large.

Athrepsia is largely responsible for this unfortunate condition. Imperfect nutrition and faulty development are the causes of this large death rate.

After birth the puny infant begins its battle for life. The mother's milk is often miserably poor, and when the breast fails, devitalized milk is given, and various combinations, called foods, are prescribed to antagonize the wasting disorder.

Every physician comes in contact with families where, through ignorance, the greatest obstacles to the successful rearing of children are permitted to exist.

The milk supply of our eastern American towns has somewhat improved of late years, but where the farming communities are made up of ignorant and penurious individuals, the stock, in the first place, is apt to be poor; the barns dirty and improperly ventilated; the help degraded; the care of the milk in the barn and milk-room in keeping with the surroundings. The question of suitable nutriment to sustain these patients is one of the most perplexing problems which confronts the physician. Even in those cases in which it would seem as if everything which money can obtain would be readily offered, the question of nutrition is baffling to the wisest.

For some time I have given the subject of goats' milk very careful consideration. In Ireland the goat is provided for the immediate nursing for children suffering from wasting disorders. In Switzerland, France and Holland goats are driven to the houses, where they are milked in the presence of the purchaser, and in this country the value of goats' milk is not unknown. Aside from any peculiar characteristic, goats' milk is undoubtedly superior as a nutrient to that of a cow. It is more readily digested, and its sustaining qualities are decidedly observable in cases in which it has been employed. For these reasons it is the best form of nourishment obtainable for children.

Several cases have come under my observation during the past few years in which the most disastrous results have followed the use of cows' milk. Tuberculosis and other diseases have been directly traceable to this source. On the other hand, the goat being practically immune to tuberculosis, a serious danger is at once removed. No case is on record in which any evil results could be attributed to the milk of the goat. Not only is the milk of the goat valuable, but the flesh of this animal is superior to that of any other form of animal food. In wasting diseases, goats' blood is of great value. Injections of goats' blood into the rectum are to be recommended in cases in which rectal alimentation is a necessity.

During the past few years remarkable investigations have been carried on by the medical profession in the science of serum-therapy, concerning the use of immunized horse blood-serum. Dr. Carrisquilla and others have been studying the effects of the non-immunized serum in the treatment of leprosy, etc.

Dr. La Crug has tried the effect of serum from a healthy horse on several children in his wards. Doses of from three to five c. c. were injected daily for three or four weeks.

The serum seems to act as a most powerful tonic. The red corpuscles increase in number, the child gains in weight and becomes stronger. There is no untoward secondary effect, except slight rise of temperature and some acceleration of the pulse. The good effects of the injections are quickly manifested; cases of athrepsia, in particular, are speedily benefited and the cure is maintained.

Sixteen cases of chorea treated in the manner described were cured in an average period of fifteen days.

Undoubtedly horse blood-serum is a natural antitoxin and is an agent of decided value in the treatment of wasting diseases in general.

The still stronger antitoxic properties of normal goat blood-serum are beginning to attract the attention of such men as Dr. Boinet, of Marseilles, France, and Dr. Carl von Ruck, of Ashville, North Carolina. The strong, active constitution of the goat, which successfully resists the diseases common to other animals, would suggest that this animal might prove most useful in the treatment of wasting diseases, and more particularly those in infancy. We have, therefore: first, the milk, which the child can take directly from the animal; secondly, the flesh, which can be given in form of extract or solid; third, the blood as a nutrient, or for purposes of bowel injections; and, lastly, the non-immunized blood-serum for sub-cutaneous injections in the treatment of athrepsia, tuberculosis, diphtheria, scarlet fever, etc.

In the care of children suffering from athrepsia, a residence in the country or at the seashore, strict attention to diet, nutrition, warm bathing with inunctions of olive oil, sun baths and the sun-heated sand bath, fleece lined flannel clothing, development of the lungs by systematic muscular exercise, musical and other entertainment for mental occupation and to prevent melancholy; all these details are necessary in the successful treatment of wasting diseases.

EDITORIAL.

SCHOOL SANITATION.

INDIANA has reported on the possibilities of infection by means of pens and pencils in the schools. As a result of a severe epidemic of diphtheria traced to pencils used by infected children and passed on to others, the State of Indiana in October, 1896, passed special rules "Governing the Sanitary Conduct of Schools." From these special rules, we copy the following:

"Rule IV.—Slates are condemned. Paper tablets or pads shall be used instead. Riveted metal boxes of tin or galvanized iron with hinged covers and of proper size, or other approved apparatus to subserve the same purpose, shall be provided for each school room. These are to receive pens or pencils, which must be collected from the young children each day, and shall not be again distributed until box or apparatus with pens and pencils have been sterilized by heating in an oven at or above boiling point for one-half hour, or by filling said box, after pencils are deposited therein, with formaldehyde gas and permitting same to stand until again needed."

Other important regulations relate to the drinking water, and it is provided that small cups shall be used, and that the supply shall be in large tanks with easy free flowing faucets, in order that the cups shall not be dipped into the water, thereby contaminating the whole supply. Spitting on the floor is forbidden; floors are to be lightly sprinkled before sweeping, and damp cloths are to be used for dusting. Teachers afflicted with pulmonary tuberculosis or other constitutional contagious disease are not to be employed, neither are pupils so affected to be permitted to attend school. Dr. Hurty, Secretary of the State Board of Health, writes that the rules are being generally obeyed and the board "feels quite certain that a salutary effect has been produced."

Indiana has certainly set an example which deserves to be copied by every State in which similar sanitary rules have not been adopted.

SOCIETY REPORT.

PHILADELPHIA PEDIATRIC SOCIETY.

Stated Meeting Dec. 14, 1897.

Dr. F. A. Packard presented patients and read a paper upon **Two Brothers with Pseudo-Hypertrophic Muscular Paralysis, and also upon a Case of Tetanus followed by Recovery, and upon a Cretin Six Years Old.**

The case of tetanus followed by recovery was shown. The patient was a boy, aged 13 years, without discoverable port of entry for the infection save an intense gingivitis and marked caries of several teeth.

Two brothers, of a family of seven healthy children, were shown. Both boys had marked pseudo-hypertrophic muscular paralysis, slight enlargement and induration of the thyroid glands, and decided mental deficiency.

A case of cretinism, age 7 years, was shown prior to the administration of thyroid medication.

DISCUSSION.

Dr. Alfred Hand: I saw this case first before Dr. Packard and also with him when he first saw it in the Children's Hospital, and I am glad to see that his opinion confirms the snap diagnosis of tetanus that I made. It reminds me a good deal of a case I saw in an adult in whom no external entrance for the infection could be found, but whose mouth was in a horrible condition, the odor from it filling the whole apartment in which the patient was. It seemed probable that some part of the alimentary canal must be the source of infection, as Dr. Francis Dercum, who saw the case, suggested. Other points of resemblance between the two cases were the presence of psychic symptoms and the recovery.

Dr. J. P. C. Griffith: I showed this boy to the ward class on several occasions, after having a talk with Dr. Packard in his early acquaintance with the boy, and I think there was considerable doubt about the diagnosis, and I presented him always with a question mark as to whether he was hysterical or really had tetanus. Now that the boy has recovered he seems so destitute of any neurotic element that a diagnosis of hysteria seems scarcely warrantable.

Dr. Jopson: I saw the boy while he was at the hospital and was particularly interested in him from the fact that another case came under my observation recently at the Episcopal Hospital in a boy somewhat older than this, which was true traumatic tetanus and in which the etiology was rather interesting as were one or two points in the clinical history. The case I refer to was that of a young man who wounded his hand while working in a butcher shop. He drove the hook by which the carcasses were hung to the ceiling through the index finger of his left hand, sustaining a compound fracture of the first phalanx. He was brought to the hospital and the resident decided to attempt to save the finger. The wound was closed and dressed. I saw him a few days afterwards, and it soon became apparent that the finger was going to slough. He had no unusual symptoms; in five or six days we amputated the finger. On the following day he complained of a little stiffness about the jaw. The resident physician insisted that he come to the hospital the next day, as he suspected tetanus, but on his way home he was taken with convulsions, as we afterwards learned from a companion, and after reaching his house was placed under the care of a physician and the case ran a typical course, the patient dying on the third or fourth day after his last appearance at the hospital. The injury which he received by the hook, which might easily be infected by the bacillus from either hides or hoofs of animals brought there, makes the etiology of the case rather plain. The other interesting point about it is that the tetanus developed shortly after the amputation of the finger; that is, about the eighth day after the injury. The fact that it developed so rapidly after operation is interesting in connection with other cases in which surgical interference with the wound has been followed at shorter intervals by the appearance of typical lockjaw. Thus Terrier reported one case in which fifteen minutes after a gangrenous toe was amputated convulsions followed by general tetanus occurred. Verneuil has cited cases of like character. Evidently the excitation of the peripheral nerves is sufficient to cause an explosion of the spinal centers, and thus precipitate the attack.

Dr. Packard: While I gave you the impression at first that I was a little sceptical about the diagnosis of tetanus in the case, I thought that it was only doubtful because he had added to the typical symptoms other phenomena, which would not be accounted for. But after he got well and we saw that he was not a bad boy and not a neurotic boy I came to the conclusion that it was an usual case of tetanus. It is easy to see how a boy teased up with tonic spasms and clonic convulsions might be entirely different from his normal self. While I feel practically sure in my own mind this was a case of tetanus, I must say we were a little doubtful for a time. The fact that the trismus left last made it seem true tetanus.

In the discussion on the cases of pseudo-hypertrophic muscular paralysis Dr. H. M. FUSSELL said: I cannot think that these thyroids are any larger than you often find them in perfectly healthy children.

Dr. E. E. GRAHAM: Is there any difference between the mental condition of the two boys? The child on the floor appears to be not in as good mental condition as the one on the table. I would like to ask whether the mental condition and the changes in the thyroid have any bearing one upon the other.

Dr. A. A. ESHNER: I shall not enter into a discussion of enlargement or not of the thyroids in these two boys, although it seems to me that both lateral lobes and the isthmus are considerably more readily palpated than under ordinary conditions, but I wish to say one word in regard to the psychic manifestation present. In the study of 21 cases of pseudo-muscular paralysis or progressive muscular dystrophy, as Erb terms it, collected from the records of the Orthopedic Hospital, there were only two clearly in the same family. In some of the cases there were vague references to possible similarity of other members of the family, but in only these two was that association positively demonstrated. Different authors give different percentages of the distribution of the disease in families.

In regard to psychic disorders, I think they constitute an extremely uncommon manifestation in connection with pseudo-muscular hypertrophy. The etiology, its definite pathology, its final pathology is not understood. It is thought by Erb, among others, that there may be fine changes in the nervous system, in the anterior horns of the spinal cord perhaps, which cannot be demonstrated by our present means of investigation, but in few, if any of the cases, have there been such marked derangements of intellection as these two children present and it is possible that the thyroid changes (if there be thyroid changes, and we may assume there are), may be responsible perhaps for the mental changes; or that the mental changes and the thyroid changes may be an independent association and the pseudo-hypetrophy also independent.

Dr. F. PACKARD: I quite agree with Dr. Eshner in regard to the absolute independence of mental changes in pseudo-hypertrophic paralysis; in limited cases the boys have almost always been rather attractive children and certainly not below the average in intellect. Dr. Graham asked in regard to the comparative mental condition of the boys. It is rather hard to tell which is the worse. I think the boy who is able to walk is perhaps more defective.

In the discussion on the case of cretinism, Dr. E. E. GRAHAM said: As I understand the history, I think some of the points, such as the early date, are of special interest. Cretinism at eight weeks, unless I am very much mistaken, is very uncommon. Usually the distinct symptoms are not noticed until the child is perhaps ten or twelve months of age.

Dr. M. H. FUSSELL: At the first meeting of the society I presented two cretins. Both of these cases have been doing remarkably well on thyroid. The younger of the two children ceased his thyroid eight or ten weeks ago and came back with a decided amount of deterioration. It seemed scarcely possible that eight or ten weeks could make such a deterioration, but when one considers the remarkable improvement in a short time there is no reason why there should not be as much retrograde change in the same length of time.

Dr. S. M. HAMILL: Koplik has recently written an article in which he has called attention to the congenital origin of these cases, a fact which he believes has not received sufficient consideration in this country, and he reports a number of cases occurring in early infancy. There have been a number of early cases reported in the English journals recently. Patterson, I think it was, who recently reported three cases of this condition, two of which occurred in the same family. The first case was observed by the mother to have a peculiar appearance at 7 months of age. It came under treatment at 19 months of age a fully developed cretin. The second child was born a fully developed cretin and lived but a short time. During the mother's succeeding pregnancy she was given full doses of thyroid extract and, in consequence, gave birth to her first healthy child. The thyroid had no deleterous effect whatever, nothwithstanding the fact that she was kept under treatment three months during the latter portion of the pregnancy. The third case reported by this writer was older than either of the others and responded slowly to treatment. I think it is a mistaken idea that these cases do not develop very early in life. I am inclined to believe a great majority of them are congenital.

Dr. D. J. M. Miller: I think the Society ought to be congratulated. Within a few months five or six cretins have been presented here, several at our first meeting and this one by Dr. Packard. I understand the case has been treated only two days with thyroid extract, and I hope he will give us the pleasure after improvement has begun, as it undoubtedly will, of seeing the case again.

What Dr. Fussell has said concerning the case he showed last spring deteriorating recently, due probably to the fact that it had not taken thyroid extract for some time, brings up a very interesting point in therapeutics. I believe it is generally thought that the extract must be continuously exhibited through long periods of time, possibly through the patient's life, if the condition is to be kept in abeyance. Last spring I presented at the Section on General Medicine of the College a woman with myxedema who had markedly improved under thyroid extract. She resembled very much the child whom we saw here this evening. The tongue was protruded, the expression vacuous, in a word, she had the idiotic facies. That patient was treated with thyroid extract for four months, then for four months the woman had no treatment whatever, and when I returned to town I was surprised to find the improvement had continued. I do not mean to say by this that she had improved beyond the point I had last seen her, but she had not retrogressed in any way. I believe there are some English cases to this effect, viz., that the treatment by thyroid extract produces a permanent relief, although such a result is opposed to the experience of most observers.

Dr. Carpenter: The cretin I showed at one of the earlier meetings has grown six inches in less than a year. It grew so fast for a while that it became bow-legged and developed symptoms of rickets. For a time I reduced the thyroid and put it upon hypophosphites—during this period the child did not grow in height. The child has done very well indeed and is bright, talks and will go to stores and do little tasks of that sort. It is doing well in every way. It now has a thick head of hair, has cut all its teeth, the fontanelle has closed and it is in a good condition.

Dr. S. M. Hamill: Dr. Carpenter's remark in reference to the bending of the bones recalls to my mind an article by Telford-Smith, which appeared in a recent number of the *Lancet*, bearing on this subject. His experience was similar to that of Dr. Carpenter. The rapid growth of the bones resulted in a bending of the bones which had to bear the weight. He did not consider this condition rickets, in other words, not a delayed perverted ossification, but a too rapid development of the bony structure. He makes the suggestion that in the administration of thyroid extract, one should be careful to watch for this excessive growth and if necessary to protect the limbs, by the use of splints, to avoid too great an amount of exercise on the feet and to give the patient sufficient nourishment of a nutritious nature, and plenty of fresh air.

Dr. F. A. Packard: One point I think rather important in this case, the child is unable to swallow liquids without choking, while it can swallow semi-solids without trouble. It consumes large quantities of milk toast and bread soaked in milk, probably because it wants to make up fluids in its body. It is absolutely unable to chew, its teeth are stunted, some of them even now decayed, and the child crushes food with its tongue and the roof of the mouth, which is eminently fitted for doing the work.

Dr. G. Hudson Makuen exhibited **Children with Speech-defects: Methods and Results of Treatment.**

Dr. G. Hudson Makuen presented five cases of defects of speech. He distinguished between stuttering and stammering and applied the term stuttering to the severer forms of stammering where speech is almost impossible or only possible after various muscular contortions which are by no means confined to the organs of speech, but distributed pretty generally throughout the entire body. The first boy shown was a stutterer, three others were stammerers and one had a case of paralalia. The latter had continuous flow of voice, but his speech was unintelligible. The prognosis he considered good as there was no impairment of cerebration. In treating speech-defects, Dr. Makuen considered training in the proper use of the vocal muscles the most important point, though this should be combined with removal of adenoids or other growths or correction of any defects as a short frænum linguæ.

His methods of treatment were demonstrated.

In 15 per cent. of cases seen by Dr. Makuen fright had been active in causation. In 32 per cent. there were stammerers among relatives and in 30 per cent. the origin might be traced to association with other stammerers and to imitation.

In the discussion Dr. E. E. GRAHAM said: Several years ago in looking over Sachs' book upon Nervous Diseases of Children, I was struck with the fact that this author makes the remark that children who are late in speaking are mentally defective. He says that this condition is rarely, if ever, noted by the mother, but if these children are examined carefully by a medical man that almost always distinct mental defects are noticed. Several years ago in talking to Dr. Makuen in reference to his study of speech-defects I brought up this point and asked him if he had ever noticed it and I would very much like if this evening he would give us his experience in regard to that point. For instance, the boy that is here to-night did not speak at all until he was four years of age. According to Sachs, and in my experience, where children are backward in talking one can almost invariably find that they are not up to the normal mentally. If I understand the history of this older boy correctly, he is now up to the normal mark mentally and his case was certainly one of decidedly late beginning stage.

Dr. ROSENTHAL: I am much interested in a case which belongs to that group exhibited last, and in which the question of heredity enters. I have a similar case in a female child, age seven years, who, until now, is unable to speak so that she can be understood by any one except those that are brought constantly in contact with her. This is an inheritance from the father, who, until the age of twelve or thirteen years, was unable to speak so that he could be understood by strangers. He acquired correct articulation late in life, and I remember his last difficulty was to pronounce the letter R, using, instead, the letter L. Other defects are still noticeable. This child, his first and only one, has all the defects he had, and what is surprising, has not acquired it by contact, for she has been brought up away from her father. At the present time only the grandmother and those around her understand everything the child means. I speak of this case because the question of heredity was spoken of by Dr. Makuen, and is rather interesting in this connection.

Dr. S. M. HAMILL: I have been very much interested in these demonstrations by Dr. Makuen and I should like to ask him the relative susceptibility to treatment of these various forms of speech-defect. I ask this question because the type to which Dr. Rosenthal has referred seems to disappear without any special treatment as the patient grows older. It seems to me that at an early age, the age at which Dr. Makuen has many of these cases under observation, it might be a very difficult form to overcome.

Dr. MILLER: I would like to ask Dr. Makuen if in his experience there is a neurotic tendency or neurotic antecedents in these cases. It seems to me that most stammerers are neurotic or have neurotic antecedents. I recall a case I saw at the Children's Hospital last winter. The child's father was a drunkard and its grandmother was an epileptic; its speech was what Dr. Makuen would denominate stammering. The child before he began a sentence would make a series of voluntary movements with his right foot. He would tap it on the ground five or six times before he could begin the sentence and then he would begin it in the way Dr. Makuen has described as characteristic of stammering. This child had always been nervous and its mother attributed its defect to heredity.

Dr. M. H. FUSSELL: In regard to acquired stammering I would like to relate the case of a boy who was one of seven; the oldest of these boys began to stammer long before the younger were born. He stammered until he was eighteen. When the younger children began to speak they stammered, and at the age of thirteen you could scarcely understand them. One boy, having reached the age of sixteen, speaks to a certain extent correctly, but the others stammer very badly.

Dr. MARY ALLEN: I have in mind a colored woman and her little boy who are both somewhat like the last case which Dr. Makuen showed. She has difficulty in making the S sound, and I always thought the boy acquired the same difficulty from her. Perhaps as he is young now, if he were taught, he might grow out of it.

Dr. G. HUDSON MAKUEN: Dr. Graham has referred very appropriately to the lack of mental development in these cases of defective speech. It is undoubtedly true that the use of language is one of the chief means of developing the mind, and children who are slow in acquiring the faculty of speech are as a rule mentally dull. On the other hand, development of speech seems to stimulate mental activity and expression creates impressions upon the mind. Some of you may recall a case that I reported at the County Society in which there was a total lack of intelligible speech up to the nineteenth year, owing to a congenital defect in the tongue, and the boy was considered to be almost imbecilic. His speech was developed, however, and he is now well advanced in his preparation for college and his teachers tell me that mentally he compares well with other boys in the school. That there are exceptions to the rule, however, is shown by another case that I presented at the College of Physicians in November of this year. The boy was fifteen years of age and had never been able to speak intelligibly, and yet he was ready to enter the High School. His other faculties, both mental and physical, were well developed, and only that part of the brain which presides over speech was defective. He wrote a good hand and spelled very well, but his speech was a jumble of sounds unlike anything I have ever heard. He now reads and speaks almost as well as he writes. About five months clinical treatment sufficed to bring about the change.

Dr. Hamill has asked about the prognosis in a case of stammering. I would say that much depends upon the patient. Every case may be cured if he will. That is to say, if he will do the work which is necessary to a cure. Stammering is purely a physical habit, or a neuro-muscular habit is probably a better expression for it. The trouble exists in one of three places, or in all of the three places. It is either in the cerebral mechanism or so-called speech centers, or in the peripheral mechanisms of speech, including the respiration, the vocal and the oral-articulating organs, or in the nerve tracts uniting the central with the peripheral mechanism. Of course, it cannot be in one of these mechanisms without at the same time affecting the others to some extent. Every stammerer will tell you that he is nervous and many attribute their affliction to nervousness, but so completely does the neurotic element disappear oftentimes after the stammering has ceased that it would seem in many cases that the stammering is the cause and nervousness the result.

Dr. Packard referred to the form of breathing which has been illustrated here in these cases. I try to teach my patients the action and voluntary control of the more important respiratory muscles. Especially must they learn to voluntarily disassociate those muscles which elevate the ribs from those which depress them.

The contraction of the diaphragm interferes with the elevation of the ribs and therefore it must be regarded as an expiratory muscle in speaking and singing. This is a point I think which is not generally recognized.

A Case of Arsenical Neuritis Following the Treatment of Chorea by Fowler's Solution was presented by Dr. R. G. CURTIN.

B. D., aged ten years, school girl, was admitted to the dispensary of the Presbyterian Hospital April 17, 1896, with a well-marked attack of chorea. She was placed on Fowler's Solution, gtt. v, increasing gradually to gtt. xii, t. i. d.

During May she was not brought to the dispensary regularly and the quantity of Fowler's Solution taken is not accurately known, but was probably between ℥ ii and ℥ iii in all.

On June 5 she was admitted to the ward because of loss of power in the legs. Several weeks before admission she had epigastric pain and vomiting and diarrhea. A short time after she had pain and tenderness of the calves of the legs. Soon she began to lose power in them and became unable to walk.

On admission, areas of bronzing were observed as the axillæ, elbows, popliteal spaces and ankles. The mucous membranes were pale.

Blood examination—2,000,000 reds c. m. m.

The pupillary reflex was normal. Both the patellar and plantar were absent. The forearm reflex was present, but not well marked.

Sensation in the legs was diminished, but not lost. The only tenderness noted was in the lines of the radial nerves.

The leg and thigh muscles were apparently somewhat wasted. They were flabby. There was no swelling, but they rapidly became cold upon exposure.

There was almost complete loss of power in the quadriceps extensors and leg muscles. The toes could be moved slightly, mainly in flexion; there was foot-drop. She was unable to walk; when attempting to do so, with support, the toes were dragged.

No change was found in the arm muscles; no wrist-drop.

The electrical reactions, June 26, showed complete absence of response to the rapidly interrupted Faradic current of any strength and but slight reaction to the strong galvanic current in the leg muscles and thigh extensors. There was less marked loss of electrical irritability in the forearm muscles.

The muscular condition was perfectly symmetrical.

The amount of urine was less than 20 oz. per day, and on admission showed the presence of arsenic by Marsh's test.

Improvement continued gradually until she became able to walk. She was discharged October 14, 1896. At that time she had a typical "steppage gait."

Examination of the patient December 11, 1897, showed the same gait, with difficulty in ascending stairs or running. Power has much improved, but not during the past six months.

The pigmentation has disappeared. The legs become blue and cold upon exposure.

Tactile sense appears to be unimpaired. There is no pain, tenderness nor paresthesia.

There is foot-drop; the foot cannot voluntarily be brought at right angles with the leg. The legs are not much wasted, but are toneless and flabby. The plantar reflex is absent, the patellar sluggish. Both Faradic and galvanic irritability is completely lost in the leg muscles and also in those of the forearms. Fibrillary contraction was observed in the thenar group of muscles.

This case is regarded as one of neuritis because of (1) the preliminary sensory symptoms; (2) the symmetrical character of the paralysis, and (3) the early and pronounced loss of electrical irritability.

DR. CLARA T. DERCUM read a paper on **A Case of Idiopathic Multiple Neuritis** in a child five years old. In the discussion on the paper Dr. S. W. MORTON said: I would like to add to Dr. Curtin's case, one of my own, which, I am sure, was an arsenical neuritis. For a long time I was in doubt as to the cause, because of the fact that my patient was a member of a highly gouty family. At the time of the occurrence of the neuritis, I was treating her for anemia. She had been taking a tablet containing arsenious acid, 1-96 gr., bichloride of mercury, 1-120 gr., Blauds iron, 4 grs., and strychnia sulphate, 1-240 gr., for three or four weeks when the symptoms of neuritis began in both thighs and the forearm, thumb and index finger of one side. They were—burning, tingling pain, numbness, loss of power, loss of reflexes and some atrophy. Giving her the benefit of my doubts, I immediately stopped the arsenic, and gave her peptomanganate of iron. In the course of a few weeks, after careful massage and faradism, she made a complete recovery. Scarcely a year had passed when she presented herself for treatment again for the same affection as formerly, and I, as formerly, gave her the tablet of arsenic, mercury, iron and strychnia. She again developed neuritis, which was again promptly recovered from, by stopping the arsenic, etc.

Dr. Dercum's case suggests the possibility of such a case occurring from diphtheria, either pure or contaminated. It is my conviction that it would be wise to make a bacteriological examination of the throat and nose of every patient presenting neuritis not plainly accounted for.

Dr. S. M. HAMILL: It seems to me that the persistent constipation to which Dr. Dercum has referred in her report of this case may have some casual relation to the condition. We know perfectly well that in diphtheria there are various forms of toxic neuritis as the result of the absorption of the toxic albumin produced by the bacilli. We also know that in cases of constipation we have the retention in the intestinal tract of various poisonous materials which should be disposed of. This prolonged retention leads to an increased formation as the result of fermentative processes, of various toxic substances as well as to their absorption, and we have resulting from this absorption all sorts of phenomena. It therefore does not seem unreasonable to me that we might have a condition such as has been described by Dr. Dercum as the result of alkaloidal poisoning of intestinal origin.

Dr. A. A. ESHNER: It seems unfortunate that we should be obliged to use the term idiopathic. Of course there are many causes for such a condition as multiple neuritis. They may be of either intrinsic or extrinsic origin. Rheumatism is one of the most common causes of multiple neuritis. I do not know that Dr. Dercum spoke of the possibility of this. It would be important to know the condition of the joints, as to the presence of hemorrhagic extravasations, etc. I wish to enter my protest against the use of such qualifications as idiopathic.

Dr. H. B. ALLYN: My impression is that the paralysis which accompanies diphtheria is almost exclusively motor. As in the case Dr. Dercum describes there were such marked sensory symptoms it seems unlikely that it was one of diphtheritic nature. I have not seen a case of diphtheritic paralysis in which there was a marked condition of sensory disturbance.

Dr. SCHREINER: It seems to me, in reading over the reports of the three cases I mentioned, the only ones I have been able to find where there was a distinct history of neuritis following the administration of arsenic, that the one Dr. Curtin has had under observation presents a greater number of symptoms pointing to neuritis than any of the others I have come across. If there is any question it would be in regard to the sensory phenomena, all of which disappeared before the child came under our observation, except the hyperesthesia over the radial nerves.

Dr. Clara T. Dercum: I do not know how we can denominate a case in which we do not know the cause, except by the term idiopathic. I wish that Dr. Eshner would specify how this could be done. The child had not rheumaitsm, at least the joints were not involved, there was no purpura, and I think Dr. Hamill's supposition is probably true—that the child had been suffering from obstinate constipation and so might have absorbed some toxines which produced this condition. The marked feature in this case was severe abdominal pain. It was necessary to keep her under opium for nearly a week. She was in bed ten days, and when we first got her up, being held, she could stand just a little bit. At present she is able to go up and down stairs by holding her hands against the sides of the walls. There is still some atrophy of the muscles, but I have no doubt she is going on to ultimate recovery.

Dr. M. H. Fussell presented an **Otocephalic Monster.**

Dr. E. E. Graham: Was there any pelvic deformity of the mother?

Dr. Fussell: There is possibly a pelvic deformity in the mother. I never saw the woman, but she had one child born in the shoulder position, dead. Two other children were born alive. There is nothing the matter with this monster's genitals, rectum or any of its organs, excepting this curious malformation in the head.

Dr. E. E. Graham: Almost all the malformation seems to be in the head. I have had an opportunity of seeing three anencephalic monsters. In neither of them was there any abnormality of other organs.

Dr. M. H. Fussell: It seems to be the rule that the other organs are normal in these monsters.

ABSTRACTS.

CONTRIBUTION TO THE STUDY OF VULVO-VAGINITIS IN YOUNG GIRLS.

J. Laborde (*These de Paris, G. Steinheil, 1896; Der Kinderarzt, 1897, viii, 11*). The author arrived at the following conclusions from personal clinical and bacteriological observations: Besides the various secondary forms of vulvo-vaginitis from traumatic vulvitis described by different authors, which properly belong to forensic medicine, there are two other varieties of discharges from the vulva of young girls dependent on two different causes, and which should be separated completely from each other. The one caused by infection originating from saprophytes which are normally present in the vagina is named vaginitis catarrhalis or simplex. The other, caused by extraneous infection, is called vulva-vaginitis specifica, the excitors of which are nearly always the gonococci.

Vulvo-vaginitis gonorrhoica is more frequently met with than is generally supposed, comprising three-quarters of all cases of vulvo-vaginitis. Prognosis is to be very guarded in those cases in which proper treatment was not employed from the very beginning, for here the patient is threatened with various complications—metritis, salpingitis, pyosalpynx, etc., perhaps even with sterility as a result of the sealing of the tubes. The author considers potassium permanganate solution 1:2000 as the best remedy.

THE TREATMENT OF GASTRO-INTESTINAL INFECTION OF INFANTS WITH SUBCUTANEOUS INJECTIONS OF ARTIFICIAL SERUM.

E. Thiercelin (*Der Kinderarzt, 1897, vii, 11*). Injections of artificial serum have been systematically employed for a number of years in the section at Hutinel in the treatment of gastro-intestinal infections and have given very favorable results. The solution used for injection was either a solution of chloride of sodium 7 grm. to 1,000 grm. of water, or the artificial serum recommended by Hayem:

R	Natr. sulfur..................	10.0
	Natr. chlorat.................	3.0
	Aq. destill....................	1000.0

or else Chéron's formula:

R	Acid carbol. liquefact.........	1.0
	Natr. chlorat. pur............	2.0
	Natr. phosphat...............	4.0
	Natr. sulfur..................	8.0
	Aquae destill.................	1000.0

These solutions are sterilized, and are injected with a slow pressure deeply into the cellular tissue of the abdomen, the thigh, or the back, or, still better, into the muscles with a slow pressure. The point of injection may then be manipulated for a few minutes to facilitate absorption. In cases of acute gastro-intestinal infection (toxic infectious diarrhea or cholera infantum), large quantities of the solution, at least 30 grm. three times daily, are to be injected, preferably the solution of common salt or Hayem's serum. The resorption of a large quantity of fluid exerts in these cases a stimulating effect, and for the same purpose large clysters of water may be administered at the same time. In chronic cases of gastro-intestinal infection the same quantities of these solutions are used, if diarrhea is profuse and the tissues parched. If, however, symptoms of prostration are prominent, subcutaneous injections of three to five grammes of the solutions should be made once or twice daily, or, better still, Chéron's serum may be used. In the cases where we wish especially to stimulate the energy of the economy, greater stress is to be laid on the strength than on the quantity of the solution to be injected. The author has very frequently seen children in the last stage of atrepsie with chronic gastro-intestinal infection and secondary infections kept alive so long by these subcutaneous injections that treatment with antiseptics could accomplish its object.

The physiological effects of the injections should always be watched, so as not to exceed favorable stimulation, for it will frequently happen that bodily weight is increased in weakly children as a result of the stimulating action of the injections; when the latter, however, are pushed still further an anxious condition of excitement, accompanied by sudden outcries and insomnia, may develop, which will only cease when the injections are discontinued.

In small, debilitated children prematurely born, and of slow development, a daily injection of two to three grammes of artificial serum will stimulate the organism and the vitality; it is, however, to be discontinued as soon as the functions have become normal, and to be again employed whenever the bodily weight ceases to increase in a normal manner.

HOW SHALL AN INFANT BE NOURISHED WHOSE FATHER IS SYPHILITIC?

Prof. A. Fournier (*Therap. Wochenschr., 1897, iv, 175*) first discusses the question: May we allow a child, whose father is syphilitic—the mother being healthy—to wet-nurse without endangering the health of the nursing woman?

1. It may be so nursed where the following favorable conditions are present: if the health of the father is perfectly satisfactory; if the syphilitic infection has occurred a long time ago, say

ten years, and if it was benign, only manifesting itself in a small number of specific symptoms, where no syphilitic phenomena have appeared during the last eight or nine years, and where treatment has been pursued in a systematic manner for a long time.

2. It should not be wet-nursed in the so-called intermediary cases, where the danger of infecting the nurse and the chances of not doing so are about equal; for example, the father has been syphilitic for about three years, the symptoms neither very slight nor severe, the last symptoms having occurred only a year ago; treatment having been carried out systematically for a few months only. In these cases the chances for the immunity of the child may, of course, be great, but the possible infection of the nurse cannot be positively excluded. In many cases, however, the rejection of a nurse is equivalent to the choice of feeding the syphilitic child from the breast of the mother or with artificial food. In those cases in which it is impossible for any reason for the syphilitic child to nurse from its mother nothing remains to be done but to bring it up on the bottle. Fournier also enters a protest against the practice of allowing children of syphilitic parents to nurse from a woman, but taking them from the breast as soon as the slightest symptoms develop. The reason for this protest is that Fournier believes the necessary adequate supervision to be practically impossible, as small lesions of the mouth or nose in the infant may be overlooked by the physician in spite of a careful examination, and because experience has proven that in spite of this careful supervision the nurse has been infected.

Another question to be answered is how the physician is to bear himself when the father of the child has previously made arrangements with the nurse in case the latter should be infected. Fournier considers that the physician's concurrence in such a case is undignified, and that he is not absolved in this compact by law. Leaving aside the question of law, however, such an acquiescence is neither honest nor moral, for the reason that the nurse is not aware of the magnitude of her danger.

It is the physician's duty therefore to protest against the consummation of such an arrangement, and if necessary to withdraw in order not to compromise his dignity. We will therefore be forced in most cases to counsel the bringing up of the child at the mother's breast, even should it be certain that individual exceptions to Colles-Baumé should occur. Fournier himself is not cognizant of any such exception in his own experience. The husband, in such a case, should however consider it his duty to tell the mother the truth, in order to induce her to nurse her own child.

For the rest Fournier, referring to the statistics lately published by Budin, and to his own experience, remarks that the latest advance in the artificial feeding of infants has greatly increased the chance of raising syphilitic children.

INFANTILE OSTEOMALACIA.

R. Meslay (*Rev. d. malad. d. l'enf., 1897, xv, 49*). As a general rule according to Meslay, osteomalacia by preference attacks females during pregnancy. In children it is often confounded with rachitis. Meslay mentions two cases, however, appearing during puberty, previous to the establishment of the menses.

Case I. A girl, 13 years of age, consulted him in February, 1892, complaining of *pains* in the thighs, which were especially felt during locomotion. Diagnosis: "growing pains." A month later, "genu valgum;" bilateral osteotomy. In July patient was dismissed, walking on crutches. Later the arms became lame and the finger tips became swollen to the size of drum-sticks. Gradually, a kypho-scoliosis developed, and by January, 1893, her condition was so much worse that she was again admitted to the hospital.

Status praesens: Kypho-scoliosis with numerous distortions of the spine. The thorax inclines to the left; the sternum is arched and inclines forward. The phalanges of the upper extremities are enlarged similar to the clapper of a bell. In the lower extremities both tibiæ are evenly bent to the inner side and touch each other with their inner edges. Toward the end of March, 1893, the right thigh was fractured on being raised, and again on May 25th at the same place. The deformity steadily increased, accompanied by violent pain, especially when touched, and by February, 1894, the upper extremities, and even the lower jaw, were involved in the general pathological changes. On May 12th death resulted from an affection of the lung, the child having in the meantime become smaller by 30 cm.

Case II. A girl 17 years old, was admitted to the hospital on June 30th. The mother is very nervous and suffers with migraine. The father, although healthy, has been a sufferer from intermittent fever in the colonies. There are no sisters or brothers. The patient herself was well up to her 13th year. From that period on her gait became affected. Pain in the bones and upper part of the thigh was complained of. On account of the difficulty in walking crutches were furnished the patient, which had, however, to be shortened from time to time. The pain experienced and the continued increase of the deformity at last compelled her to adopt the recumbent posture. After an illness of two months' duration fractures occurred in both thighs during an attempt at lying down. Besides this, there was present great enlargement of the head, with softening of the bones; the thorax became contracted; the sternum greatly protruded; scoliosis of the upper portion of the spinal column; the abdomen distended; the ribs became prominent; the clavicles took on a convex outward curve; the legs are turned outward. The bones can be bent like india-rubber.

The general condition is poor. The reflexes are normal. Tachycardia is present. The liver is found to extend below the arch of the ribs to the breadth of a few fingers.

The urine is acid and has a fetid odor; spec. gr., 1035; no sugar; contains a small quantity of albumin; urates, 8.30; phosphates and chlorides, 15.0; lactic acid, 8.50; quantity of urine, 1.200 lit; pus corpuscles and a few cylindrical hyaline casts are present. Death occurred on October 28th (that is within four months), with an increase of all the symptoms.

Autopsy: The left side of the heart enlarged, valves normal; liver enlarged; spleen congested; kidneys pale; uterus normal; bony substance easily cut, thin; canal enlarged and filled with a thick dark-red jelly.

Numerous fatty cells; capillaries of the blood vessels enlarged and filled with red blood corpuscles, which formed hemorrhagic islets.

The substance of the bone consisted in 43.53 per cent. of mineral matter, 56.47 per cent. of organic matter. In this respect the infantile form of osteomalacia does not differ from the common form. The affection is most easily explained as a trophoneurosis, having its origin in the ovaries, although we lack much support for this theory.

Treatment, the author says, is principally symptomatic, as we are not cognizant of the cause and nature of the disease. Good food and hydrotherapeutic treatment are most important. To act directly on the bony system, a teaspoonful three times a day of equal parts of ferr. carb. and carbonate and phosphate of lime are indicated.

M. Th. Maffert Allison, of Newcastle, is said latterly to have obtained very good results with red marrow (medulla ossium rubra, pulv.) in doses of 0.3-0.9 three times daily.

NOCTURNAL SPASTIC COUGH IN INFANTS ACCOMPANIED BY VOMITING AND ITS RELATION TO CORYZA.

P. Gaston (*Journ. de Clinique et de Therap. Inf., 1897, xiv, 1023*). It quite frequently occurs that the physician is called at night to a child with a cough, without, on auscultation, being able to find any reason for it, and unsuccessfully administers numerous anodyne remedies. The origin of the cough is sought for in some reflex which is sometimes caused by worms, and sometimes by other causes. A thorough examination in most cases discloses that the real cause of the intractable, incessant cough is a coryza posterior. This cough has the following characteristic symptoms: It is spasmodic, similar to whooping cough; occasions nausea and vomiting, and comes on in the night, when the child is in bed, never occurring when the child is up, and very rarely in the daytime. It is met with only in very young children, because these are not able to blow the nose or hawk, and the mucus flows from the back of the nose into the pharynx. The child coughs, because the irritation caused by the mucus to the pharyngolaryngeal mucous membrane incites a reflex. The cough is spasmodic because the mucus drops down in the vicinity of the arytenoids and the vocal cords and excites spasm of the glottis and attacks of dyspnea. The cough occurs at night because the head of the child in bed is inclined backward and the mucus thus easily reaches the pharynx and larynx. The treatment is the passing of a tampon saturated with boro-vaseline through the whole length of the nasal passages, three or four times a day. At first the child will sneeze, then it will become accustomed to the tampon and sniff up the boro-vaseline, which then penetrates through the nasal passage to the pharynx. Astringent substances may be added to the boro-vaseline if thought necessary; for example, tannic acid, or alum, and especially antipyrin.

THE THERAPEUTIC AND DIAGNOSTIC IMPORTANCE OF LUMBAR PUNCTURE AFTER QUINCKE.

Dr. Felsenthal (*Der Kinderarzt, 1897, viii, 75*). The author reports two cases, the first of which was a child three years of age, presenting high fever, restlessness and continuous moaning, the main characteristic symptom being a moderate *stiffness of the muscles of the neck.* This latter symptom was increased on the following day, and the child endeavored to bore his head in the pillow, at the same time emitting loud cries. On the third day the stiffness of the neck was marked, the spinal column rigid and immovable; there was grinding of the teeth and high fever. The diagnosis of acute cerebro-spinal meningitis seemed clear. To determine, however, whether the effusion was serous or purulent he performed lumbar puncture according to Quincke. As a result about 40 ccm. of clear, colorless fluid, containing a small amount of albumin, but no sugar, was obtained. This settled the diagnosis of an acute serous cerebro-spinal meningitis. The operation, however, undertaken for the purpose of diagnosis, was followed by other results. The child became more quiet during the night, and on the following morning it recovered its full senses. It recognized father, mother and sisters. The rigid neck and stiff spinal column, however, remained. The child was perfectly immovable, and all contact with the spinal column was painful. Under the influence of inunction with mercurial salve the condition gradually improved, and the child within two weeks was able to leave its bed, and was discharged fully recovered. Quincke himself observed improvement in certain cerebral symptoms in cases of both serous and seropurulent meningitis, immediately after the puncture, or even during its performance, cephalalgia became less or disappeared, stiffness of the neck improved, and the mind became clearer. The good results obtained in these cases may be explained theoretically. Lumbar puncture, on the one hand, diminishes the pressure, and on the other, as in puncture of the pleural cavity, promotes the unloading of blood-vessels, thus favoring a more rapid circulation of the blood and lymph, by which absorption of the remaining exudate is initiated.

In the second case the result was not so favorable, but it was not so clear a case; it might have been a meningeal tuberculosis following an attack of measles; such cases have been described by Monti.

Quincke, the father of lumbar puncture, advises the puncture to be made on a level with the second to the fourth lumbar vertebra, somewhat laterally to the middle line. The spinal cord ends at the first, or possibly at the second lumbar vertebra. If the puncture, therefore, is made below the third lumbar vertebra, there is no danger of wounding the cord. It is also not very likely that any nerves should be injured, as the nerves of the cauda equina are spread out in the spinal fluid and easily move out of the way of the needle.

Lumbar puncture has until now been principally employed only in tubercular meningitis. It is self evident that the cure in an undoubted case of tubercular meningitis, observed and reported by Freyhan, could not have resulted from the lumbar puncture alone. Some of these cases might, however, be saved in this manner, as many of these patients die from an increasing hydrocephalus, and its sequelæ. At all events it might be possible to save many cases where only the tuberculosis of the pia without cerebral pressure has to be combated. Incessant vomiting and violent headache can frequently be made to disappear by the simple operation of lumbar puncture, until the patient passes into a state of stupor and becomes insensible to pain. From these reports it seems that this procedure is directly curative in serous meningitis, and of so much importance in tubercular meningitis that it should not be neglected.

A purely palliative result has frequently been obtained by this measure in tumors of the brain and in chronic hydrocephalus, but even this is of great value. Particularly in the latter condition lumbar puncture seems destined to take the place of the operation for hydrocephalus. Freyhan speaks of it as a diagnostic measure of the greatest value, which every one admits. It clears up the diagnosis between purulent and tubercular meningitis. In purulent meningitis the fluid is always found to be turbid; in tubercular meningitis it is always colorless, and in its sediment von Fürbringer and Lichtheim, with few exceptions, discovered tubercle bacilli. In tubercular meningitis the fluid contains little albumin and is always *free from sugar.* In tumors of the brain, it contains little albumin, but *always sugar.* In tubercular and purulent meningitis fibrin coagula are always formed when the liquid is allowed to stand for some time; in tumors and abscesses these coagula are absent.

THE BACTERIA OF MUMPS.

Michaelis (*Therap. Wochenschr., 1897, iv, 366*) presented to the Verein fur innere Medicin preparations of the bacteria of mumps, which he had obtained in one case by catheterizing the ductus stenonianus, and in another from a culture from the secretion of a parotid abscess. Michaelis was able to demonstrate quite characteristic bacteria under the microscope. They were also found in the blood of patients suffering with mumps. These bacteria are diplococci, and greatly resemble the gonococcus and meningococcus, being, however, much smaller. Inoculation experiments in animals gave negative results.

HYSTERICAL APPENDICITIS.

Rendu (*Therap. Wochenschr., 1897, iv, 342*). In the Société medicale des hôpitaux, Rendu reports two cases showing the difficulty occasionally met with in the diagnosis of this affection. The first case was a patient eighteen years of age who was admitted to Brissaud's division, complaining of pain in the region of the cecum, which had existed for three or four days; an elongated tumor the size of a fist, directed downward and inward, of a doughy consistence, and very sensitive to pressure, was found in this locality. There had been constipation, vomiting and regurgitation of food for three to four months. Brissaud at first suspected an appendicitis; as, however, the general condition of the patient had not materially suffered from the intractable vomiting, the case impressed him as a temporary hysterical phenomenon. After a few days the seeming appendicitis disappeared, and a left lateral hemi-anesthesia made its appearance after a nocturnal nervous attack. Vomiting, followed by anorexia, continued, however, and artificial feeding had to be employed. At times the appendicitis would recur, to disappear again, with the same symptoms, but with the peculiarity that the tumor became smaller and the pain greater with every relapse. In this manner attacks of pseudo-appendicitis occurred five or six times. During one, anuria, accompanied by violent pain in the abdomen, was also present, which would undoubtedly have given rise to a diagnosis of peritonitis if the previous condition of the patient had not been known. This hysterical symptom complexus is designed by the English as "spurious peritonitis," and frequently accompanies meteorism in hysterical subjects. The patient left the hospital cured. Three months later she was admitted to Rendu's division, with a renewed attack of pseudo-appendicitis. Rendu, not knowing the previous history of the patient, had her operated on in view of the alarming symptoms. The appendix was found to be in a congested condition, but without ulceration; the case was one of follicular appendicitis, the symptoms of which had been heightened by the hysterical condition. After removal of the appendix, a permanent cure resulted.

In the second case the hysterical symptoms simulated perfectly a perforation of the stomach (violent abdominal pains, vomiting, eructations, great hematemesis, anuria). At the operation, the stomach was found to be perfectly normal, but a slight follicular appendicitis was present, whose symptoms had been greatly exaggerated by the hysterical condition. After removal of the appendix, the patient was dismissed cured. Ten years ago Talamon recognized the existence of a third form of appendicitis besides simple appendicular colic, and appendicular colic with parietal appendicitis, which he designated as appendicitis with peritonismus, or pseudo-peritonitis hystericus. Since then he has observed three more cases belonging to the category. In the first a simple appendicular colic took on the aspect of an acute perforating appendicits, through hysteria. In the other two cases, the picture of a chronic recurring appendicitis was presented, one of which was cured, not by operation, but by energetic suggestion. Two groups of cases should be distinguished: 1. Those in which there is no change in the appendix, therefore belonging exclusively to pseudo-appendicitis hysterica, which occurs either in the form of a simple appendicular colic accompanied by violent pains in the right hypochondrium, vomiting, notable hyper-esthesia of the subcostal hysterogenetic zone, or else as an appendicitis with a circumscribed peritonitis, in which the contraction of the rectus abdominis gives the impression of a circumscribed tumor. 2. Those which the symptoms of a slight appendicitis are so increased by the presence of hysteria that a perforating appendicitis with a diffuse peritonitis is simulated. These are cases of appendicitis with hysterical peritonismus. It is important, from a practical point of view, to distinguish these two forms, for, in the first group, repeated attacks would lead to a resection of the appendix, while in the second, on account of the violent symptoms, we may easily be led to an early operation, which could of course, be avoided, if twenty-four to forty-eight hours had been allowed to pass.

Talamon is convinced that cases of this kind are particularly frequent in children. *Hysterical pseudo-peritonitis* is usually of a hyper-acute character, but may also take on a subacute and chronic form, when it will generally simulate a tuberculous peritonitis. The diagnosis in these cases may be made especially difficult by the additional presence of violent paroxysmal pain, vomiting, alternating constipation, diarrhea, and at times even fever.

A BEAN IN THE LEFT BRONCHUS OF A CHILD. OBSERVATIONS ON THE VALUE OF CLINICAL SYMPTOMS IN THE PRESENCE OF FOREIGN BODIES IN THE UPPER AIR-PASSAGES.

Paul Koch (*Monatschr. f. Ohrenheilk., 1897, xxxi, 83*). A boy, nine years of age, while playing, aspirated a bean into his larynx. After causing a severe attack of dyspnea, it reached the left bronchus, where it remained, occasioning only slight discomfort. As the bronchus was not completely occluded, physical examination was negative, and it was assumed that the bean had been swallowed, until on the second day the appearance of general and local symptoms permitted the recognition of a bronchitis of the left side, accompanied by infiltration of the lung. The movements of the bean occasioned paroxysms of dyspnea, indicating an operation. Low tracheotomy was performed, followed by healing of the wound by first intention. It is interesting that in this operation no canula was inserted, no suture of the cartilage employed, and the whole thickness of the muscles was sutured to the skin in the whole length of the wound, so that healing took place under moderate pressure and total rest of the larynx.

It is rare to find so large a foreign body in the left bronchus. That it could remain intact for seven days, despite its organic structure, under such favorable conditions of disintergration, is remarkable.

In studying the various symptoms produced by foreign bodies in the upper air passages, the author comes to the following conclusions:

1. The history, if correctly obtained, will always form the most reliable means of diagnosis.
2. Physical exploration of the organs of the chest, besides laryngoscopy, are occasionally unsatisfactory.
3. Digital examination of the interior of the larynx, where the physician possesses a long index finger, is of great importance.
4. The degree of intelligence possessed by the patient has a great bearing on the diagnosis.
5. Many so-called cases of pulmonary phthisis are the result of the unrecognized presence of a foreign body.
6. The spitting of blood is of no value whatever; if it should be present, we are not warranted in diagnosing the presence of a foreign body; if absent, the latter cannot be excluded.
7. Supraclavicular and jugular emphysema of the skin is a very rare symptom.
8. Spontaneous pain on swelling is quite uncertain; we are obliged to be somewhat skeptical, especially in nervous patients.

Fortunately the diagnosis is in most cases easy, and the author only wishes to indicate the difficulties which may be met with in rare cases.

A CASE OF PRIMARY FATAL HEMORRHAGE AFTER THE REMOVAL OF ADENOID GROWTHS.

E. Schmiegelow (*Monatsschr. f. Ohrenheilk., 1897, xxxi, 115*). These are cases very rare, the hemorrhage being usually controlled before the catastrophe takes place. The case reported by Bryson Delavan, where a child died merely from a digital exploration of the post-nasal space, is to be explained by the fact that the child was suffering from hemophilia. Thomas French is aware of only two other cases in America, where death resulted from hemorrhage following the removal of adenoid vegetations. The following case is reported by Schmiegelow:

E. F. Monti, twelve years old, presented himself at the Poliklinik of the *Friedrichsspital* in Copenhagen, on September 23, 1895, accompanied only by his sister. The patient complained of difficulty in breathing through the nose. He was small for his age, was a mouth breather, and the nose was compressed. On both sides of the neck, in front as well as behind the sternomastoideus, there were present numerous enlarged glands. The patient's aspect was scrofulous. A digital examination of the cavum pharyngonasale proves it, as well as the choanæ posterior, to be filled with adenoids. The finger used for the purpose of exploration was withdrawn slightly tinged with blood. An assistant seated the patient in his lap, supporting the latter's head with one hand and grasping the child's hands with the other. The patient was not excited, and remained quietly seated during the whole operation, offering no resistance. One of Gottstein's curettes, held like a penholder, was passed back into the nasopharynx. First, a few strokes were made in the median line, followed by directing the handle of the instrument to the left, which brought the cutting part of the instrument to the right side of the nasopharyngeal cavity, where 3-4 scrapings were made. Suddenly a very profuse hemorrhage of bright arterial blood took place from nose and mouth, no force having been used with the instrument. As it was seen at once that great danger threatened, assistance was quickly summoned. The patient was placed on a table and a tampon of iodoform gauze at once applied, anteriorly and posteriorly. The patient gasped for breath, but was extremely pale and cyanotic. The hemorrhage ceased as soon as the tampon was applied, but respiration could not be induced in spite of subcutaneous and intravenous injections of salt water. The whole scene passed very rapidly, the blood gushed in a thick stream twice or three times from mouth and nose and then the patient collapsed. The loss of blood amounted probably to 500 g.

Autopsy showed that the right lateral wall of the nasopharyngeal cavity was to a great extent injured, and remnants of the bleeding were found in the ruptured tissue. The internal carotid presented an irregular rupture, situated just anterior to its entrance into the carotid canal of the petrous portion; but *there was no lesion of the vessel at the spot corresponding to the injury of the walls of the pharynx.* Numerous glands were noticed behind the sheath of the vessel. The wall of the vessel was microscopically normal.

MALIGNANT ADENOMA OF THE BED OF THE THYROID.

W. Serenin (*Letopis Russk. Chirurgii; Monatsschr. f. Ohrenheilk., 1897, xxxi, 131*). The author reports two cases, which were observed and operated on in the Marienhospital at Moscow. The cases were those of a young man eighteen years of age, and of his sister ten years old, both of whom presented in the anterior and lateral regions of the throat, multiple, button-like, elastic and compressible tumors. These were extirpated, and proved to be adenomata of the thyroid gland, arising probably from accessory thyroid bodies. After extirpation they recurred. In the girl death of the goiter resulted as a sequel to the operation, from paralysis of the vocal chords. Finally the author quotes the following points for a differential diagnosis in adenoma of the bed of the thyroid:

1. A tumor situated on the anterior portion of the neck, gradually enlarging.
2. Compressibility (depending on the venous geflechte surrounding the tumor).
3. Formation of nodules.
4. Adolescent age of patient.
5. Insufficient physical and mental development.
6. Family-disposition.
7. Colloid degeneration of the nodules in the neighborhood, and microscopical finding.
8. Recurrence.

THE TREATMENT OF PAPILLOMA OF THE LARYNX IN CHILDREN.

A. Rosenberg (*Arch. f. Laryngol., etc., 1896, v, 402*). Tumors of the larynx in children (which are nearly without exception papillomata) are met with more frequently, according to statistics, than is generally supposed. To decide the question whether the endolaryngeal method or thyreotomy and external removal should be preferred for the ablation of these new growths, Rosenberg has collected and arranged all published cases, with especial reference to the manner and success of the operation, and it is easy to see from this that the percentage of cure is higher in those children who have been treated by the endolaryngeal method than in those treated by thyreotomy, and that the former should be preferred where an operation is deemed necessary. Should this not be successful, or should we meet with dangerous dyspnea, tracheotomy must be performed, if intubation cannot be done or does not relieve, and we must wait or do thyreotomy. Laryngatomy should only be done in older children, and even then only in exceptional cases. In this case it is to be recommended if the whole operation is not made by a laryngologist, that the latter, after the larynx has been laid open, undertake the removal of the growths, as he, being most accustomed to it, will be able to operate best in this field, and will be best able to judge the importance of the step to the function of the larynx later on, and will complete the operation in a proper manner.

PERITRACHEAL ABSCESS IN CHILDREN.

Prof. Ferd. Massei, Naples (*Arch. f. Laryngol., etc., 1896, v, 56*). A number of cases in children in which either during or immediately following tracheotomy or intubation for croup, pus was evacuated; the case of a five year old child in which Massei observed a distinctly glistening, round red tumor below the left paralysed vocal chord, and another quite similar case in a child four and a half years of age, arrested his attention. After studying all the facts in these cases he felt convinced that all these patients were suffering with abscesses whose seat was in the space below the rima glottidis on a plane with the first tracheal rings, but which probably had their outlet between the laryngo-tracheal canal and its surrounding tissue. In this situation we find, as has been already minutely described by Léval-Piquechef and Gougenheim, a chain of lymphatic glands, consisting of three groups. Massei believes that the upper group, taking its course along the recurrent nerve, laterally from the trachea, are the seat of the abscesses clinically observed by him, so that we have to deal with a suppurative inflammation of the glands similar to the idiopathic retropharyngeal abscess in children. The situation, small size and close relation to the lower part of the larnyx and to the recurrent nerve, sufficiently explain, (1) the impossibility of recognizing them from without, (2) the ease with which they may cause stenosis, (3) the possibility of complications on part of the recurrent nerve. The symptoms to which a peritracheal abscess gives rise, are, as a general rule, similar to those of croup, or of an acute stenosis of the larynx, and thus it happens that, according to Massei, it has often been mistaken for this frequently present localization of diphtheria in children. The diagnosis may occasionally be made by the help of the laryngoscope, if the characteristic swelling, the apex of the abscess, is seen in the hypoglottic region; otherwise, it is difficult, and we may be in doubt whether we are dealing with a spasm of the glottis, a catarrhal laryngitis, pseudocroup, true croup, a foreign body or aphthæ.

Therapeutically, the ice bag is recommended where we are able to recognize the inflammation of these peritracheolaryngeal glands early; when, however, there is danger of asphyxiation, intubation or tracheotomy must be resorted to; it is not impossible that the introduction of the canula, where the abscess is ripe, might open the latter, and thus allow free exit to the pus.

A CASE OF CONGENITAL MYXEDEMA TREATED WITH THYREOIDEA.

Simon (*Therap. Monatsh., 1897, xi, 220*) presented to the *Congres Francais de Medecine a Nancy*, a child five years old, which had been under treatment for two months by thyreoidea, and showed marked improvement. In addition to the cardinal symptoms of myxedema the child presented a marked deficiency in weight, its weight being only to kg., its length only 60 cm. Since thyreoid treatment was begun all symptoms have plainly decreased, the weight and size increased.

THE APPLICATION OF GASTRODIPHANIA IN THE INFANT

Dr. Ferd. Epstein (*Jahrb. f. Kinderh., 1896, xli, 3-4*). The demonstration of a gastroectasia or a gastroptosis in the infant has been, up to the present time, a very difficult matter, as the distension of the stomach with air or with carbonic acid gas never led to any positive results, the latter being also somewhat unsafe on account of the restlessness of the child.

ON THE LOOSENING OF THE CONJUNCTIVA OF THE UPPER LID FROM THE TARSUS AFTER INJURIES.

Goering (*Deutsche Medic. Wochensch., 1897, xxiii, 173*) has last year met with two peculiar cases of traumatic edema and emphysema of the lid, the findings of which did not correspond in one material point to the present experience, as well as to the statements in the text books. For example, we read in E. Fuchs, *Lehrbuch der Augenheilkunde:* "Edema, as well as effusion of blood, is met with in a large measure only in the conjunctiva of the bulb, and in the transition-fold. . . In the conjunctiva tarsi a like affair does not obtain, as this is too closely adherent to the underlying cartilage." Furthermore: "The entrance of air below the conjunctiva of the bulb is occasionally observed, contemporaneously with the exit of air from under the skin or into the orbital tissue."

Both of Goering's cases represent a total release of the conjunctiva palpebræ super, from the tarsus, as a result of blood effusion and emphysema.

Case 1.—This was the case of a boy who had fallen down a stairway a few hours previously. The patient, who was about ten years old, was somnolent, and only occasionally a little clear in his head. The right upper lid was strongly swollen, tense and of a violet blue color. From under the tightly closed palpebral fissure a formless tumor the size of a walnut and of a dark red color had extruded, which at first made the impression of a colossal chemosis of the conjunctiva of the bulb, but which proved, on closer examination, to be the conjunctiva of the upper lid, which had become loosened and had been extruded. The fold, situated ½ mm. from the margin of the lid, could with some little pains be plainly seen. The contents of this sac were fluid blood mixed with air; on palpation a crackling sensation was felt, which was also noticed on palpating the lid itself; therefore we had to deal with the entrance of fluid and air between the tarsus and the conjunctiva. During the night the patient died. Autopsy proved the cause of death to have been a fracture of the skull, extending into the cribriform plate; the continuity between the tarsus and conjunctiva of the upper lid had been severed by a bloody effusion; no injury of the bulb.

Case 2.—A new-born babe had been delivered by forceps on the previous day by a colleague. The latter states that there was nothing present to attract attention shortly after the birth of the child, except a slight swelling and bluish discoloration of the left upper lid; the bulb was plainly to be seen and was not injured. At the present time the upper lid is much swollen, tense, dark blue to violet; a few drops of blood made their way through the intact epidermis even on careful palpation, so great was the tension. The orbital margin, only with difficulty palpable, seemed intact, the root of the nose moderately swollen, as it seemed, and painful to pressure; from between the closed lids a compact, dark-red and blackish looking swelling protruded—a sac of the size of a pigeon's egg—filled with fluid and air, which undoubtedly was the conjunctiva of the upper lid torn off from the tarsus. Much mucus was discharged from the nose. Crepitation was only indistinctly felt. The conjunctiva constantly exuded blood and a serous fluid, which ran over the child's face. The patient was otherwise quite bright.

The course of the second case was an altogether favorable one, under the same therapeutic measures as were applied in the first. Scarification of the prolapsed conjunctiva as near as possible to the margin of the lid, which gave vent to much bloody fluid, and application of a moderate pressure bandage. On the day following, Goering was able to return the protruded sac under the lid, and after four more days the bandage could be removed, as the edema of the lid had greatly disappeared. Doubtless we had in this case also to deal with a communication of the orbit with one of the neighboring cavities, caused by the pressure of one of the tongues of the forceps on the root of the nose; from violent and continual crying, air was then forced into the connective tissue, and at last undermined the firmly adherent conjunctiva also. Thus, when a continued and free hemorrhage occurs from an accidental lesion of a somewhat larger blood vessel, the subsequent yielding of the conjunctiva from the underlying cartilage and its protrusion through the palpebral fissure is not an impossibility—as these two cases have demonstrated. In Case 1 the injured boy did not cry, but the hemorrhage was, undoubtedly, much more profuse and continuous, from the extensive injury to the skull.

A CASE OF ATRESIA ANI SCROTALIS.

Stendel (*Deutsche Medic. Wochenschr., 1896, xxii, 809*) was called to a child one day old, as the latter had not yet voided meconium. The anal orifice was found to be absent in this boy, who was otherwise healthy and fully developed. In place of the anus was seen a passage the size of a raven's quill, which took its course from the site of the anus along the raphe to about the middle of the scrotum, where it ended in a small opening. A small quantity of meconium could be forced out of this passage by stroking from before backward. As the hollow sound which was introduced found its way to the neighborhood of the anus, the passage was cut open by means of a blunt-pointed knife, guided along the sound to the anus, after which the accumulated meconium was at once evacuated in large quantities from the normal sized rectum. Although it was demonstrated by digital exploration that the true external sphincter was absent, the child is, nevertheless, able at this time, two years later, to retain its feces, even when diarrheal, with perfect ease. The flaps of skin which were formed by the incision have kept pace with the growth of the child, so that even at the present time the course of the rectum, which had previously reached to the middle of the scrotum, is plainly outlined.

Heredity could not be established by Stendel, nor could syphilis be traced in the family. That some abnormal development had taken place in the fetus is demonstrated by three retractions of the skin at the summit of the sacrum, and above it on both sides, 6 cm. distant from each other, forming a triangle about the size of a 10 pfennig piece. In these three places the skin is firmly adherent to the bone; no other abnormity of the bone is, however, to be found.

ACUTE PRIMARY FIBRINOUS BRONCHITIS.

F. Nachod (*Wiener Klin. Rundschau, 1897, xi, 9*) exhibited a preparation from a case of acute fibrinous bronchitis. The patient was a child four and a half years of age, who was suddenly taken ill with vomiting and febrile movement. On the second day of illness the patient coughed up a much ramified fibrinous coagulum, and the temperature fell to normal. This was repeated three times; after each expectoration of membrane, the intense cyanosis, dyspnea and fever disappeared. Duration of the disease, ten days. Cure.—The speaker pointed out that these cases might be mistaken for diphtheria; in his case this was excluded by bacteriological examination. Before making a diagnosis of "primary fibrinous bronchitis," it should be borne in mind that similar bronchial exudates may be coughed up in croupous pneumonia. It is true in this case, as in most casese of primary bronchial croup, that complications on the part of the lungs, such as small foci of broncho-pneumonia and atelectasis were present, but no croupous pneumonia. Bacteriological examination revealed the presence of the staphylococcus albus, a finding which was also made by Sokolowski a short time ago; it would not be fair, however, to draw further conclusions from this finding. Sections gave positive results with Meigert's fibrin stain.

THE USE OF SCHLEICH'S INFILTRATION ANESTHESIA.

Karl Briegleb reports (*Der Kinderarzt for December 3, 1897*) the results of his experience with infiltration anesthesia. Most of his operations were on adults, but he says there is no obstacle in the way of its use with children. It is best to use the weakest of Schleich's solutions (cocain .0001, morphin .00005 in one Prava syringeful), and sometimes to omit the morphin altogether. The only hinderances are the child's fear and the resistance arising from it; larger children do not always oppose, however, and infants can be firmly held. That the children do not feel pain is shown by the fact that they often stop crying at the very minute when the knife or cautery is being used. Briegleb has used the infiltration method of anesthesia alone in removing an angioma, in puncturing abscess of the back, and in four cases of resection of the ribs, in children from eight months to about five years of age. He has not done a tracheotomy in a child using only the infiltration method of anesthesia, but recommends the use of a small quantity of chloroform to quiet the child, followed by Schleich's anesthetic; chloroform may be necessary later, in case the child begins to toss violently, but a very small amount is used in any case.

BACTERIOLOGY OF WHOOPING-COUGH.

Czapleroski and Hensel have been studying the epidemic of whooping-cough in Königsberg, with a view to finding out the cause. The sputum was collected directly in test tubes, and washed with peptone water; from the solid flakes from the sputum smear preparations were made, which were stained with diluted carbol-fuchsin or carbolglycerin-fuchsin, after a short treatment with 1% acetic acid. Cultures were made on Lœffler's serum at 37° C. The micro-organism found is a small, short rod, with egg-shaped, rounded ends. It is about the size of the influenza bacillus, which it resembles in staining properties, but from which it differs in cultural characteristics. The size varies, the smallest being a coccus; the grown rods are 2-3 times as long as broad; they sometimes grow in chains. The long form rarely appears in the sputum. The bacillus is non-motile, has little resistance, and resistant forms have not been observed. In the sputum the organism is usually free, rarely in the cells.

In poorly washed sputum, other bacteria, especially streptococci, are found. Pure cultures are obtained by secondary streak cultures on plates. The growth occurs as a not very characteristic grayish yellow layer on the serum, and may be transplanted to other media; grows well on gelatin at 23° C. Inoculation experiments were negative. This finding was constant in more than 30 cases. The investigators were strengthened in their belief that this bacillus is the cause of whooping-cough, by the fact that they suspected, on the ground of its presence, the disease in several cases in which the clinical diagnosis was made late. In addition to this, one of the experimentors, during the course of the work, was taken with severe coryza, with general symptoms; cough was slight, but a few attacks of a convulsive nature were noticed. In the nasal secretion the bacillus was found in great numbers. The authors believe that Burger described the same germ in the *Bert. Klin. Wochensch., 1883, No. 1.*

TREATMENT OF CHRONIC DIARRHEA IN CHILDREN.

Diarrheas may be classified as (1) persistent diarrhea of urslings, (2) persistent diarrhea of artificially fed infants, (3) chronic diarrhea in weaned children, (4) chronic diarrhea in older children. (1) In the first months of life there sometimes occurs a green biliary diarrhea without fever or vomiting; the general condition is not often affected, but digestion is painful, accompanied by gaseous eructations and by meteorism. It should be combated if the child is losing strength, because it may lead to athrepsia or a severe infection. The treatment is simple; regulate the nursing and defer them if necessary; discontinue the sterilized milk if the child is on mixed food; give vichy or other water by teaspoonful five to ten minutes before each nursing. If necessary, chalk, with bicarbonate of soda or magnesia, subnitrate or salicylate of bismuth, phosphate of lime, tannin or tannigen (.15-.20 three or four times in 24 hours), or calomel or castor oil may be used. (2) The first indication is to change the diet, the cause of the diarrhea being usually infected milk. If not possible to give the child breast milk, sterilized milk is to be given, diluted if the stools are too firm and fat, and slightly salted. Food should be insufficient rather than excessive. Ass's milk may sometimes be given with good results; if the stools are fetid and the tongue coated, one may try koumiss. Above three to ten months, if the stools are fluid and abundant, the use of uncooked meat may be valuable. Before each meal, give a coffeespoonful of Vichy water, a few centigrammes of bicarbonate of soda, a little carbonate of magnesia, etc. After meals, a small dose of pancreatin or papaine, or better, hydrochloric acid. If the stools remain liquid, bismuth, tannigen or nitrate of silver is indicated. (3) Chronic diarrhea in weaned children is to be treated first by a return to a diet of sterilized milk or bouillon. Hydrochloric acid, Carlsbad salts tannin and its derivatives, astringents, insoluble antiseptics (benzonaphthol, bismuth salicylate, salol, etc.), may be employed when the diarrhea persists. Small doses of morphine may be required. Salt baths, friction, abdominal massage, astringent injections, are all useful. Frequent recourse should be had to laxatives, calomel and the saline laxatives. (4) In children from 5 to 15 years diarrhea is often met with which is due to disturbance of the gastric function. Hydrochloric acid is generally useful. A small dose of a laxative water or neutral salt should be given every morning. Excellent results are obtained by the use of Carlsbad water.—*La Revue Medicale*, January 5, 1898.

PRACTICAL NOTES.

Tetany of Gastro-Intestinal Origin in Children.—

℞	Bismuth salicylate	3.6
	Benzonaphtol	1.8
	Sugar	1.5

Divide into 12 powders.
Four powders to be taken daily.

℞	Potassium bromide	3.000
	Chloral hydrate	1.000
	Distilled water	100.00
	Syrup, bitter orange	50.0

M. Dose for child two or three years old is three tablespoonfuls daily.—*Tordeus.*

For Epilepsy.

℞	Sodium bromide	12.0
	Sodium bicarbonate	15.0
	Tr. physostigma	5.–10.0
	Water	100.
	Saccharin	0.2

M. Dose, tablespoonful diluted in water mornings and evenings; after four days, stop for three days and then commence again.

Treatment of Whooping-Cough with Serum from Vaccinated Animals.—78 cases of whooping-cough were treated with serum from a vaccinated goat, between the 12th and 20th day of the disease. The results were usually favorable.—*Kinder Arzt, Dec. 3, 1897.*

Some Suggestions for Removing a Plaster of Paris Dressing.—When the dressing is put on, steps may be taken looking toward its removal: (1) A stout string is put underneath, in the line in which the cast is to be opened. When ready to remove, a strong wire nicked in several places, is drawn through by means of the string, and is used as a chain saw to cut the plaster. (2) A thin stout steel wire between each layer of bandage, with the ends out, can be used; each one is pulled out, beginning of course with the top one. A solvent, such as nitric or acetic acid, or even strong vinegar, applied along the line of incision softens the material so that it can be cut with an ordinary knife, or if such solvent is not used, a saw or stout knife may be utilized.—*T. J. Rugh, Phil. Polyclin, Jan. 15, 1897.*

Dilatation of the Stomach.—Eighty per cent. of the children Comby examined for this condition showed its presence. The cause is to be found in the too great volume of food, in the bad quality of the same, and in the too early administration of solid food. Autointoxication is the result; washing out of the stomach the best treatment.—*Kinder Arzt, Dec. 3, 1897.*

Persistent Diarrhea of Children.—

℞	Argent. nitrat	gr. 1
	Ac. nitric dil	gtt. 5
	Muc. acacia.	
	Syr. aurantii cortex āā	℥ iv.

M. Sig.—Teaspoonful every 3 to 4 hours.—*La Clinique, Jan. 1, 1898.*

Urticaria—Itching.

℞	Distilled water	450	parts.
	Cherry laurel water	50	"
	Chloral hydrate	5	"
	Cocaine hydrochlorat	3	"

—*Provence Medicale.*

Mortality from Diphtheria and Scarlet Fever.—The mortality in St. Petersburgh from diphtheria during the first nine months of 1897 was 35 per cent. in spite of the use of antitoxine. Of 2,848 cases of scarlet fever 540 died, (nearly 27 per cent.). The mortality has been much less for the last few years, but the increase, especially in diphtheria, is ascribed to the crowding of the children's hospitals, and to the tardy use of antitoxine.—*La Revue Medicale.*

Xeroform as an Intestinal Antiseptic.—L. Ryders, of the medical faculty of Nancy, has reached the conclusion that xeroform is an ideal intestinal antiseptic. It undergoes very little change in the stomach, but in the intestine yields tribromphenol and bismuth oxide. The toxicity is exceedingly slight. It may be given in wafers or in gumarabic emulsion, in doses of 5 decigrams four times a day.—*Am. Med. S. Bul., Jan. 10, 1898.*

Apthae and Thrush.—

℞	Ac. salicyl	0.7
	Borac	5.0
	Saccharin	0.15
	Aq. distillat	300.0

M. Sig.—Use as gargle in older children; coffeespoonful internally every two hours in younger children.

Enuresis Nocturna.—

℞	Cupr. sulphur. ammon.	0.02
	Aq. distillat	15.0

M. Ft. sol. Sig.—3 to 6 drops twice daily.

Narcotic and Sedative.—

℞	Codein phosphor	.01—.025
	Aq. distillat	20.0
	Syr. simpl.	30.0

M. Sig.—Coffeespoonful 3 to 4 times daily.—*Der Kind. Arzt, Dec., 1897.*

The Treatment of Ileus in Children.—WIGGIN (*Memorablien, 1897, xv., 421*) does not believe the opinion entertained by many physicians that clysters of water or air can cure a case of ileus is justified, basing his statement on 103 cases treated by himself. Of 39 cases in which the treatment was confined to clysmata of water or air, or both combined, only 13, that is 41 per cent., were relieved. Of 64 cases, in which laparotomy was performed a cure was effected only in 21, or 32.8 per cent.; among these cases, however, are included all those in which resection or incision of the gut was imperative, after too great a delay. After eliminating all cases in which surgical interference was absolutely necessary, and an antiseptic treatment could be carried out, Wiggin obtained 14 cures in 18 cases of ileus, which were operated on early, that is 77.7 per cent. Should we determine to employ clysters, one and a half liters of a warm salt solution may be passed into the bowel, holding the water-bag at least one meter above the patient; if one irrigation does not prove successful immediate laparotomy is indicated.

Treatment of Lichen Urticatus in Rhachitic Children.—NEEBE recommends in the *Med-chirurg Centralbl.* the internal use of antipyrin and the local application of naphthol for itching.

℞	Antipyrin	1.50
	Aqua distill	
	Syr. cort. aur. amar. āā	25.0

M. S.—One to two coffeespoonfuls at night.

℞	Naphthol B	0.40
	Vaselin	20.0

M fl. Ungt.

S.—To be thoroughly rubbed in for ten minutes.

For the rhachitic symptoms phosphorus is administered:

℞	Phospor	0.02
	Ol. jecor. aselli	100.0

S.—One to two coffeespoonfuls a day.

Experience with Laborde's Rythmic Tongue Traction, for the Resuscitation of the Asphyxiated New-born.—(*Memorablien, 1897, xv., 43k*). LUDWIG KNAPP, of the German Universitaets-klinik, at Prague, makes the following report:

This treatment, recommended in 1892, by Laborde, consists solely in the rythmic dragging forward of the tongue with the fingers, until the first spontaneous respiratory act is made. The physiological explanation of this method is found in the reflex excitation of the center of respiration through the irritation of certain lingual and pharyngeal nerves (glossopharyngeus, laryngeus sup.). This method which was originally applied successfully only in the adult, was soon taken up in the treatment of the asphyxia of the new-born. Resuscitation was successful by this method in all the cases (11) to which Knapp applied it, and failed in one case only.

Knapp offers a resume from a clinical standpoint in the following propositions:

1. We should not abandon the hope of saving the life of a child even in the most desperate cases.
2. It is to be recommended that Laborde's method be used exclusively in a long series of cases, so as to obtain a final verdict as to its value.
3. If this should be successful, it may be accepted as an addition to our methods for the resuscitation of apparently dead-born infants, as it seems particularly applicable in those cases in which Schultze's method cannot be applied, for example, in the case reported, and others observed in prematurely born babies.
4. Laborde's method, on account of its simplicity, is free from all objections. It is based on the physiological connection between certain lingual and pharyngeal nerves, with the medulla and has the trustworthiness of an experiment.
5. An advantage not to be underestimated lies in the fact that this method may be used while the child is immersed in the warm bath, thus doing away with the danger of cooling the child's body, which is unavoidable in the application of other methods.
6. The method is exceedingly simple and easily mastered; furthermore, it also bears on a question which is of especial importance in private practice. It has been said that the usual methods employed in this emergency are liable to make a painful impression on the mother who has just been delivered, and is anxious for the life of her child; this cannot in the least degree be said of Laborde's method.

A Communication on the Result of the Treatment of Diphtheria by Sulphur, in Conjunction with Chlorate of Potash.—PRESSEL (*Memorablien, 1897, xv., 363*). This treatment is advocated by Liebermeister, and consists in blowing powdered sulphur by means of a bulb-insufflator on both tonsils, about five times daily, the patient between times taking a two to four-per-cent. solution of chlorate of potassium internally, according to the age. Under this method 187 cases treated from June, 1893, to the end of January, 1894, furnished only 8 per cent. of deaths, and of 60 cases treated since the beginning of February, 1894, all recovered.

Gonorrhoeal Infection by Flies.—Prof. WIELANDER, of Stockholm, made the following observations: A fly, having come in contact with gonorrheal secretion, may still be contaminated with it after three hours without the gonococci present in it having lost their ability to develop. By this fact alone an epidemic of 33 cases of blenorrheal conjunctivitis, which Wielander witnessed in 1883 in a maternity home could be explained. Gonococci were found in the secretion from the eyes of all the children affected. In the secretion from the urethra of the mother whose child was first affected with conjunctivitis gonococci were present. They were found in the discharges of only two other women. The children of these mothers must have been infected in some other way, particularly as great care was exercised after the first cases had appeared. If we take into consideration the frequency with which flies settle upon the nose, eyes, etc., of these young children, the connection between the former and infection seems pretty clear.

A Case of Precocious Menstruation is reported by Prof. J. W. IRION, who delivered a German woman of a girl on Oct. 10, 1895. On the 17th of the same month a sanguinous flow which continued 14 days, appeared at the vulva of the child, who was in perfect health. The bleeding did not return in December, but the child seemed to suffer from all those nervous symptoms which usually accompany the suppression of menstruation in the adult; an eczema made its appearance, covering the child's whole body, and then gradually subsided. Since that time, the bleeding has recurred with absolute regularity; the child is in good health, the breasts and mons veneris, however, appear to be markedly developed, and during the bleeding the former always become swollen, and are slightly tender to pressure. The mother menstruated for the first time at the age of thirteen years.—(*Centralbl. f-Kinderh. 1897, ii., 107*).

A Case of Multiple Infantile Sclerosis observed by Prof. EICHHORST, Zurich, proves that this affection may undoubtedly occur in children, and that heredity has some influence in its production. A woman suffering from multiple sclerosis gave birth to a boy, who later on developed the same disease. In both mother and child the sclerotic changes remained confined to the spinal cord.

Persisting Ductus Omphalomeseraicus with Formation of a Diverticulum of the Small Intestine, was the diagnosis made in a child seven weeks old, presented by Naerath, in the Royal Society of Surgeons, in Vienna. The patient when admitted showed a prominent plugshaped swelling in the region of the umbilicus, at the apex of which a pinhead sized fistulous opening was found, through which a sound passed for eight cm. The diverticulum of the small intestine was ablated, the gut sutured and dropped into the abdominal cavity. Healing by first intention resulted.

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ORIGINAL ARTICLES.

THERMIC FEVER IN INFANTS.

By John Zahorsky, A.B., M.D.,

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THE subject of thermic fever in infants is almost entirely ignored by our text-books on pediatrics. Its existence seems to be doubted by many authorities, and but for the fact that recent observations have utterly convinced me of the frequency and importance of this fever, I should hesitate to record this extensive study of the subject.

The Data.—Holt[1] in his text-book gives the disease no place, and as a factor in the causation of summer diarrhea, the direct effect of heat is made of little importance.

Rotch[2] mentions two cases occurring in children, but the possibility of infantile insolation is not expressed.

The American Text-book of Diseases of Children[3] gives no consideration of the subject, and this is also the case with Smith's text-book.

Ashby and Wright[4] quote Meinert, who "believes that the acute forms of summer diarrhea are produced directly by the action of high temperature, and are in reality a sort of sunstroke."

Vogel[5] discusses insolation in children who vigorously exercise in the sun.

Keating's Cyclopedia[6] gives a general account of the disorder, and points out that a high temperature may be an etiological factor in the summer mortality.

From time to time one or more cases of thermic fever in infants are reported, but they seem to be overlooked by most physicians, who regard them merely as rare curiosities, or more frequently express a doubt as to the diagnosis by pointing out that gastro-intestinal toxemia had not been excluded. Thus Lafleur[7] reported a case of heatstroke in a paper read before the American Pediatric Society. In the discussion which followed, Drs. Fruitnight, Adams, Seibert, Griffith—all admitted the occurrence of this affection and each reported one or more cases. In Dr. Adams' cases necropsies were made which corroborated the clinical diagnosis. But Dr. Wentworth called the attention of the Society to the fact that gastro-enteric toxemia may cause similar symptoms, and intimated that this affection should be excluded before making such a diagnosis.

Illoway[8] in 1891 reported two cases. In this paper some interesting facts are pointed out; thus the occurrence of nausea and vomiting are recorded and a theory of their production formulated, I shall have occasion to refer to this paper again.

This summer I had the sad opportunity to witness four fatal cases among the infants at the Bethesda Foundling Home. Altogether about 40 cases of marked thermic fever were noted in this institution this summer; and I am convinced that in former years such cases also occurred, but were not diagnosticated as such. On the night of June 11, 1897, at the above named institution, at three o'clock in the morning an infant had an eclamptic seizure. Ten minutes afterward another infant was attacked in the same way. The rectal temperature was 110.6 in the one, and 111.4 degrees F. in the other. They were immediately placed into a cold bath by the nurses. When I arrived one was dead and the other died in a few minutes, although cold baths and stimulants were freely used. I found at the same time six other infants who had fever ranging from 102 to 107 degrees F., all these, however, were saved. On careful inquiry and examination no evidence of acute gastro-intestinal infection could be illicited, although vomiting had been a symptom in a few cases. The postmortem and blood examination showed clearly that thermic fever only could explain the disease. On the evening of July 8th, again several cases occurred and one more death with hyperpyrexia. About one-half of the infants in the nursery during this period of heat showed febrile movement ranging from 101 to 108 degrees F. which could not be attributed to any form of infection. On the morning of July 11th, the atmospheric temperature fell 15 degrees, and with it all the fever which had persisted for four days in spite of care, disappeared as if by magic. About 15 cases more, only two hyperpyrexial, occurred during the rest of the summer. These cases together with my previous experiences, also four cases in private practice formed the material for my study.

General Pathology.—The doctrine advocated by Liebermeister, that fever is a displacement of thermotaxis to a higher level, is not applicable to thermic fever. The initiatory febrile movement is undoubtedly due to a disproportion of thermolysis to thermogenesis, but not necessarily a diminution of the former as is so often taught. The truth is, that even in high external temperature, heat loss may not be lessened, but on the contrary may be enormously increased. The disproportion arises from the fact that the sum total of a subnormal thermogenesis plus an excessive absorption of radiant heat, is greater than the possible heat-dissipation. It seems valuable, therefore, to ascertain what telluric temperature is the optimum to an infant with a minimum amount of clothing.

It is well known that a brooder used in the case of a premature infant may cause fever if the heat is constantly kept over 90 degrees F.

Rotch[9] has reported the case of an infant born six weeks before term, which developed fever on the third day, which entirely disappeared when the temperature of the brooder was lowered from 90 to 85 degrees F. This is rather surprising when we know that calorific production is so very small in such tiny beings. In the light of this evidence, the direction given by Armstrong[10] that the newly-born infant should be placed in a room having a general temperature of 90 to 100 degrees at least, is somewhat amusing, and shows that the prevalent ideas on infantile temperature are derived from theoretical misconceptions. It is by putting such theoretical knowledge into practice that the new disease, inanition fever, described by Holt[11] has its origin. Judging from quite a number of cases under my observation, I can but reach the conclusion that overheated rooms and an insufficient supply of water are at the root of the trouble; consequently it is a true thermic fever. Rachford[12] tries to explain this fever by resorting to the much abused uric acid as a cause, he holding that the fever is reflexly caused by irritating uric acid crystals in the urinary tract. But this theory lacks all proof, and the usual absence of pain in this fever speaks strongly against it; the frequent deposit of urates is the result of the diminished water supply. It is to be regretted that Holt has not recorded the temperature of the rooms in which his cases of inanition fever developed. If the nursery, according to Rotch's[13] direction, be maintained at a temperature not exceeding 75 degrees, inanition fever would be very rare.

The fetus is surrounded in utero by an aqueous medium with a very high specific heat, so that a difference of one degree F. between the heat of the infant and that of the mother is sufficient to insure physiological thermolysis. But the fetus entering the world replaces its aqueous for a gaseous medium, which, having a low specific heat, must be very much lower in temperature to carry away the same amount of heat. Especially is this true if radiation is negatived by excessive clothing. An external temperature of 90 to 95 degrees F. frequently causes a *febris neonatorum*, or at least taxes the heat-regulation to its utmost, in order to maintain the physiologically thermal equilibrium. The air and objects surrounding the infant should never be over 90 degrees F., while 75 to 80 degrees when the infant is clothed are temperatures to be preferred. Of course, in all these cases the question of air currents and radiating surfaces has to be taken into consideration. The presence of either affects our desired thermometric elevation.

According to Heubner[14] an infant of 5 to 6 months receives in a day an amount of food representing 620 calories as a minimum. If half of this is utilized, there are about 300 calories to be dissipated daily. Deductions made from the experiments of Helmholtz, Nebelthau, Hirn, Rubner, Loewy, and others, also some experiments of my own, show that an infant loses 15 per cent. of the total heat by pulmonary evaporation. Integumentary loss is proportionately greater in the infant, but this depends on the amount of clothing. About 40 to 50 per cent. is thus dissipated. Evaporation by the skin, except in very young infants whose sudoriferous glands are not active, represents about 20 per cent. The remaining 25 per cent. can be placed to the amount lost by conduction and convection. Of course these figures are only approximate for an infant of 5 months. As the food is given warmed, the heat loss by the excreta is practically nothing. Warming the inspired air at ordinary temperatures produces a heat loss amounting to about 1 per cent. of the total. To sum up, the loss would be as follows daily:

By pulmonary evaporation, 45 calories.

Evaporation from the skin, 60 calories.

Radiation, 120 calories.

Conduction, convection, and heating inspired air, 75 calories. If the infant is warmly clothed the loss by radiation and convection may become one-half or even less, and if the evaporation cannot be increased on account of an insufficient supply of water one can readily see how thermic fever can occur even in an infant, since the retention of 10 calories would necessarily raise the corporeal temperature from 1 to 3 degrees, depending on the weight of the infant. That 20 or 30 calories may be retained, clinical experience abundantly proves.

Etiology.—*Predisposing Causes.*—The predisposing causes may be divided into two general classes: autogenetic and heterogenetic factors, the former having their origin in the infantile organism, the latter in its surroundings. Here as elsewhere we must recognize that any disease is the product of a complexity of predisposing and determining agents, as Hueppe[15] so strenuously advocates; so that it is necessary to review all the factors, since all are important.

The autogenetic factors arise from infantile conditions which are accompanied (1) by excessive thermogenesis, (2) by diminished thermolysis, (3) disturbed thermotaxis.

Under the first heading rickets, gastro-interic infection, malaria, and other infectious diseases may be placed. It is probable, too, that the character of the food may influence heat-formation, and, therefore, the ingestion of an excessive amount of sugar, on account of its facility of combustion, may be counted as predisposing factor.

Diminished heat-dissipation is frequently due to the administration of too little water. This was clearly shown to be the case in the four fatal cases. Jacobi[16] has frequently emphasized that an infant must have water, and especially is this necessary during the hot days. Valentin[17] found twice the amount of pulmonary transpiration in a man after the ingestion of a large quantity of water. The effect of drinking much water on perspiration is too well known to need more than a reference.

The loss of water by increased evacuations acts the same way. The fluid which should be evaporated is withdrawn by a way which cools very little. Diarrhea and vomiting are the processes which, by abstracting the necessary water from the tissues without cooling the body, are to be regarded exceedingly dangerous factors. Masso[18] has shown that the abstraction of a large quantity of blood is soon followed by a rise of temperature. One of the most rapidly ending fatal cases, who had an insatiable thirst, vomited very frequently as the temperature commenced to rise. It was also noticed that all the cases of diarrhea invariably had a much higher fever on very warm days, so much so that I confidently expected a great number of infants to have high fever when the terrestrial temperature was 95 degrees or more.

Too little is known of the thermic centers to make more that hypothetical remarks. But it is very probable that the heat-regulation is much more stable in some infants than in others. A case of acute leptomeningitis was noticed to have a temperature of 105 to 107 degrees during the warm weather, while a similar case had a temperature of 102 degrees when the weather was cooler.

As the summer season advances there is a gradual adaptation of the infantile organism to the heat. The nervous control becomes more stable, the various thermolytic organs more active; consequently, the possibility of heat reduction is very much enhanced; so also a cellular tolerance of leucomaines adds to the safety of the infant.

It is a common experience among adults, that very warm days in June or July cause a greater amount of distress, than a similar temperature in August or September. It is probable that this adaptation plays some role in the lessening of infant mortality in the latter summer months, and the explanation that the micro-organisms become less virulent as the summer advances, which Fenwick advocates, certainly lacks all proof. At any rate, the fact that the infant becomes gradually acclimatized must be recognized as an important factor in the reduction of the death-rate.

The heterogenetic predisposing causes may also be classified similarly:

1st. Agents preventing thermolysis.
2d. Agents increasing thermogenesis.
3d. Agents deranging thermotaxis.

Under the first heading an excessive amount of clothing by diminishing radiation takes first place. Frequently, babies in order to guard them from the unquestionable detrimental effect of cold, are so warmly clad that a slight thermic fever arises. Heavy and large diapers should not be used during the summer. All garments should be light, and a certain amount of exposure during very hot afternoons is beneficial.

In the second place a constant dorsal position may be mentioned. This prevents about one-third and sometimes one-half of the infant's surface from participating in the heat dissipation. Thus it was noticed in several instances that the backs of infants lying for some time became heated equal to that of the internal temperature. Two unruly infants who were allowed to roll on the bare floor, did not develop heat-stroke, while similar babies beside them, under the same care and feeding had a rise in temperature.

A motionless position belongs under this class. While active exercise very much increases the formation of heat, passive movements such as rocking, or moving in a buggy, enormously increases the loss of heat by evaporation, conduction and convection. A person frequently while moving does not feel hot, but on resting the sense of heat becomes unbearable. Experiments on animals have been repeatedly made, which proved that immobility in a hot air or exposure to the sun will much sooner affect the temperature than a certain amount of motion. The severest cases occur at night, which is partly due, no doubt, to the quietude of the little one.

Overcrowding is also a noteworthy factor since the heat radiated from one to another increases the probability of heat retention.

A high relative humidity by preventing evaporation acts as a causative agent. This was observed in the latter part of the hot period the first weeks in July, 1897.

The exciting cause is a high terrestrial temperature. Whenever the infantile temperature exceeds that of its surroundings by less than 8 degrees F., there is always danger of thermic fever if any predisposing causes are active. However there are certain conditions which must accompany the exciting cause. The most important of all is the presence of powerfully radiating surfaces. An infant put under a tent will not develop any heat symptoms, even if the temperature is very high, simply because there are no radiating surfaces. And this explains why heat-stroke only develops after a few days of excessive heat; for it requires this time for our stone streets and brick walls to become heated to the same degree as the atmosphere. When the walls reach a temperature of 95 degrees F., the heat radiated from them becomes enormous, and this is the dangerous agency. The heat of the sun falling on moist earth becomes insensible, as it becomes latent in the process of evaporating the ground water; but in our streets nearly all the radiant heat is thrown back as such.

The rise in temperature must be sudden, for if this takes place slowly, a gradual adaptation of the organism prevents the fatality.

The first series of heat strokes that were noticed last summer, occurred during the sudden rise of terrestrial temperature on June 8th to 12th, when in four days the daily maximum increased 25 degrees, and reached 95 degrees; while the average was 85 degrees. It was during this period that two fatal cases occurred at the Bethesda Foundling Home. On June 17th the atmospheric temperature reached 96 degrees and several cases occurred again with one death. One case in private practice was studied at this time. But in this instance the additional heat of a large bake oven in the basement added to the temperature. The next series and most general occurred on July 8th to 11th, when in four days the atmospheric heat rose from 89 to 97 degrees F. July the 10th was memorable as 30 babies at this home had temperatures ranging from 100 to 107 degrees in spite of the free administration of water and best of care. The nurses and physicians were constantly busy giving the overheated little ones a bath. July the 11th the temperature fell 20 degrees, and a remarkable result occurred. The thirty infants who had been having febrile movement for three days, some distinctly hyperpyrexial, became free from fever inside of 24 hours. This was so striking, and accompanied the fall in general heat so closely, that it forms a powerful argument to sustain the thermic rather than the fermentative causation of the pyrexia. The general average for this period was 88 degrees.

The next cases occurred during the latter part of July and the first week in August. The average mean temperature for this period was 88 degrees again, with a maximum of 97 degrees. Two cases with a temperature of 107 degrees developed. The high temperatures of August and September were not accompanied by thermic fever, although it occasioned no doubt, more pyrexia among the many cases of gastro-intestinal infection which were treated at that time. In this connection the experiments of Vincent are instructive. This author found that dogs exposed to a temperature of 98.6 to 101 degrees died within four hours. Rabbits succumbed to a heat registering 93 to 94 degrees F. The fatal temperature of the body in these animals was 113 degrees.

Morbid Anatomy.—The post-mortem findings are very few, and macroscopically it is difficult to prove that a certain case died of this disorder. However, the necropsy aids in diagnosis by showing the absence of other diseases.

The blood is found very dark, fluid, and accumulated in the viscera. The cerebral sinuses are engorged. The brain on section is found to contain much blood, also to be very soft and moist. The thoracic and abdominal viscera show the same engorgement. The ventricles of the heart are dilated. Beyond this nothing is characteristic. In the four autopsies made, great pains were taken to find evidences of gastro-intestinal infection, but with negative results.

The blood during life shows characteristic changes. My thanks are due Dr. Fisch, who has kindly furnished me with most of the following data. My own observations corroborate these findings. It is only in the severer forms of heat-stroke that decided changes are found. In the milder forms only a slight leucocytosis and a greater tendency to crenation is visible. But the hyperpyrexial forms exhibited a marked hemocytolysis; the erythrocytes being extensively disorganized, and free hemoglobin readily demonstrable in the plasma. The peculiarity of this free hemoglobin is that it is not in solution as in some of the cases of poisoning, e. g., chlorate of potash, but in very distinct granular masses. The red blood corpuscles show a greater vulnerability to external agents, so that ordinary manipulation and straining cause them to lose their hemoglobin and therefore become indistinct in outline. Dark granules were not discovered in the leucocytes. This feature of the blood is so constant in the severe forms that its recognition becomes of utmost importance in furnishing a means of differentiating this from other fevers.

According to the recent investigations of Van Gieson[20], the theory of auto-intoxication has received a very strong support. He reports to have found extensive parenchymatous degeneration of the neurons throughout the nervous system. The blood has also been found more toxic and human perspiration on very hot days possesses greater poisonous properties. And here the observation made this summer seems opportune, that infants who suffer much from prickly heat are not prone to be overheated. The miliaria is a consequence of the excessive toxicity of the sweat, and where this is constantly excreted the general symptoms do not appear, but the poison leaves proof of its presence on the skin. Arloing[21] has recently emphasized the variations in the toxicity of perspiration.

As to the process by which this toxemia is formed nothing definite is known. Probably the lessened oxidation which the thermotaxis induces to maintain thermic equilibrium, has a tendency to allow toxic intermediate products to be formed during the constant katabolism.

Naunyn[22] has shown that an increased destruction of nitrogenous matter, and a diminished excretion of carbon dioxid takes place during an elevation of temperature. This seems to corroborate the above-mentioned hypothesis.

More than interesting is the recent observation of Prof. Donitz[23], that small doses of tetanus-toxin produce in rabbits progressive emaciation, and at the same time the usual parenchymatous degenerations are demonstrable. It becomes a question, therefore, if the spasm-producing toxin of hyperpyrexial insolation is not similar in composition. In two of my series where there had been severe tetanoid attacks with the hyperpyrexia, progressive wasting followed, upon which a most painstaking macroscopic post-mortem examination threw no light whatsoever. Nevertheless, certain cerebral symptoms during life indicated some degeneration of the nervous cells.

Symptomatology.—The symptoms become definite in correspondence to the elevation of temperature. My observation leads me to believe that infants on a very warm day. who are very restless and fretful, frequently show a thermometric reading of 100 degrees; so that thirst and restlessness may be the only signs present. Under the care of a mother who fans her baby this probably does not occur. Heat prostration with a subnormal temperature was not observed.

Clinically we may classify the varieties into three arbitrary divisions: the mild, severe, and hyperpyrexial. The term asphyxial does not seem appropriate.

Mild thermic fever is not distinguishable from other simple fevers. As mentioned, restlessness and thirst are the only symptoms noted. There is no pain, however. It is the absence of pain that differentiates, in a great measure, this from fever due to gastro-intestinal infection. Only in one case of the hyperpyrexial forms a headache seemed to be present.

The mild cases may be limited to those whose temperature does not exceed 103 degrees F.

The severe forms are those in whom the fever registers 103 to 107 degrees. The patient may be restless, but more frequently lies perfectly quiet; however intense hyperesthesia is present. Pricking the skin, slight noises, strong light, or any sudden stimulus, produces an exaggerated response. The reflexes are more active. All the symptoms are merely phenomena of this hyperesthesia. Respiration is rapid and shallow; the heart is very much quickened in action; the pulse is soft and easily compressible. The integument feels very hot to the touch and presents a flushed appearance; occasionally perspiration stands on the face, especially when the relative humidity is high. Erythematous patches were noticed, but miliaria is rare. Vomiting ensues frequently, due, no doubt, to the ravenous drinking of milk and the hyperesthesia of the gastric mucous membrane. In the severer cases the vomited milk is not coagulated as the rennet is absent. There seems to be some evidence that diarrhea can be produced purely through the agency of heat, since the toxins may be eliminated by the gastro-enteric mucous membrane, and as shown by Forchheimer[24] may cause disease.

The hyperpyrexial form is accompanied by severe symptoms, the hyperesthesia being very great until coma supervenes. The pulse is very rapid, frequently imperceptible. The skin looks dusky sometimes distinctly cyanotic, and usually feels very hot to the touch. The eyes are half open, staring or oscillating, and often suffused as if covered by a film. The pupils are usually dilated. The facial expression is that of intense anxiety, but not pinched as if in pain. Convulsions are the rule, and rapidly succeed each other until death ensues. One of the most remarkable symptoms is muscular rigidity. Usually the upper extremities are involved. The forearm may be flexed or extended. Slight opisthotonos was noticed. Any muscle or set of muscles may be in a state of tonic contraction; so that the whole patient may be rigid. The masseters are frequently firmly contracted, so that the jaws cannot be separated, and there is no doubt that many cases of thermic fever are mistaken for tetanus. Adie[25] reported such a case, where a little patient of eighteen days had a temperature of 110 degrees, with trismus and brachial rigidity. The infant convalesced under hydrotherapy, and he attributed the symptoms to fleeting tetanus. Heat-stroke was not considered. In the case of heat-stroke reported by Illoway trismus was a prominent symptom. Muscular contractions, as Phlüger has shown, enormously increase heat production; so that this rigidity may be a factor in the sudden rise of temperature. At any rate, while the rigidity exists, the temperature is very unyielding to therapeutic measures.

Sequelae.—Anemia of the most pronounced type invariably follows the hyperpyrexial form. The change in the color of the infants is very marked, and examination of the blood shows diminished hemoglobin.

Gasto-enteric infection is another almost invariable sequel, when the food administered is not sterile. It has been demonstrated that acute febrile conditions occasion anachlorhydria; especially is it true that thermic fever diminishes the digestive secretions. Thus milk with its many bacteria, meeting no digestive ferment, rapidly decomposes and produces various diseases. If milk with virulent bacteria is administered the result is disastrous. Therefore with our measures to secure sterile foods, we should also combat high temperatures.

A third sequel is inanition and progressive wasting. Ten such cases occurred in my series. I have already hinted as to a possible explanation of this, but the fact that the infants after such warm exposure cannot very well bear a lowered temperature must also be considered a factor.

Other sequelæ are leptomeningitis, of which I observed two cases; pneumonia occurred as a sequel five times; and, finally, a greater vulnerability to changes of the weather must be classed as a constant sequence.

Diagnosis.—As no characteristic symptoms are present, the diagnosis must rest on the existence of predisposing and exciting causes. Malaria is readily excluded by the absence of the hematozoa. Without an examination of the blood one might readily mistake the febrile movement of an intermittent fever for thermic fever as occurred once under my observation.

Heat-stroke may be mistaken for tetanus; but a high temperature is not present in the latter disease except very rarely, just before death, so that the occurrence of trismus accompanied by a slight fever is diagnostic of tetanus rather than heat-stroke.

The milder forms may be mistaken for gastro-enteric infection, and, in fact, the diagnosis is often impossible. But on careful investigation, the scientific physician should be able to judge whether a sufficient number of factors are present to overtax the heat-regulation, or other causative agents are active. As mentioned, the absence of pain I have found very useful. In the severe and hyperpyrexial forms, the examination of the blood reveals the nature of the disease by showing the characteristic hemocytolysis.

Prognosis.—As to the immediate result, the prognosis is favorable in all those whose temperature does not exceed 108 degrees F. Temperatures above this usually lead to disastrous results. Death ensues when the thermometer registers 111 to 113 degrees.

As the sequelæ are so frequent and grave, even a mild form of heat-stroke should not lightly be considered, for the infant's chance to live through the summer is very much diminished. In hospitals and asylums heat-stroke almost invariably leads to a fatal result before the autumnal climatic conditions arrive.

Prophylaxis.—This is deduced from the causes. Since it is not possible at all times to avoid the exciting cause, an effort should be made to prevent the occurrence of predisposing factors. Measures to prevent inflammation, rachitis, and intestinal indigestion should be strenuously employed. The food should not be too rich in carbohydrates and hydrocarbons. Plenty of cold water should be administered, especially when there is a loss of fluids by diarrhea. If vomiting supervenes give it by the rectum or even subcutaneously. Ice water, however, is hardly to be recommended for infants. Excessive exercise should be avoided, but keep the infant in motion, changing its position frequently. Fanning has been found a very effective procedure. Professor Saunders introduced the use of electric fans at the Bethesda, and these very effectually prevented heat-stroke. Care should be taken that the fans do not play directly on a baby.

As mentioned above, excessive clothing should not be used. As few persons as possible should occupy the same room.

The most effective prophylactic measure is the removal of infants from stone houses altogether, and keeping them under a tent. Residence in the country during the hot season is practised extensively with the best results. Granitoid pavements and stone houses will continue to assist in destroying thousands of infants yearly. The administration of quinine in an emergency might be used as a preventive means.

Treatment.—The best treatment is not the ice-bath, since this contracts the peripheral arterioles and markedly increases the muscular rigidity. Therefore I only mention this measure to condemn it. In the milder forms sponging the body with hydrant water and the administration of more water internally is all that is required.

In the severe forms a bath, the temperature of which is not below sixty degrees, may be used; at the same time friction should be vigorously applied to keep the peripheral arterioles dilated. Stimulants may be given as needed.

It is in the hyperpyrexial forms that our skill is taxed to the utmost. The indication to reduce the fever must be met promptly. Here it is well to fix in mind the principle emphasized by Coplin and Blevin,[30] "Increase the peripheral circulation." Make the skin intensely red and then even hydrant water will rapidly produce the desired result. Nitro-glycerin as a vasodilator acts very well; so also does amyl nitrite. External irritants should be used. Friction with a towel or rough sponge, or even the naked hand, is good. A mustard bath also seems advantagous. If, in spite of friction, the skin looks blue, a hot mustard bath should be used as soon as the temperature is slightly lowered. A plunge into hot water gives good results in the adult, and should be tried.

The cold spray has been found the most effective treatment. At the St. Vincent Hospital, according to Lambert,[26] dash-cold water on the patient was used and gave better results than any other treatment. The spray seems the ideal method, since by its mechanical effect it causes relaxation of the arterioles, and reflexly acts as a powerful stimulant. The water used in the spray should not be too cold.

It is hard to see any good reason for continuing very powerful antipyretic measures after the body temperature has fallen to 105 degrees. Milder measures should then be resorted to.

For the convulsions and tonic spasms, chloroform has a wonderful influence. This was enthusiastically advocated in adults by Koerfer,[27] also Garnett.[28] As soon as the infant is anesthetized, the contracted muscles relax, peripheral circulation becomes better, the temperature falls; but the most wonderful influence is the stimulating effect on the heart. In one case where the pulse could no longer be counted, and scarcely be felt, the inhalation of chloroform brought the rapidity down to 130, and its character became much better. Koerfer thought this effect to be due to the quieting influence on the hyperesthetic nerves; and it may be probable that the convulsive toxin overstimulates the heart, and chloroform would be a physiological antidote. The fall in temperature is explained by the relaxation of the muscular system and the diminution of oxidation.

Free perspiration should be induced as soon as possible. Diuretics act well also by assisting the elimination of waste products. Unless this is done the fever will rise again, for this tendency persists for two or three days.

Stimulants to be recommended are strophanthus, ammonia, ether, camphor, nitroglycerine, and alcohol. Nux vomica should not be administered, as it may only be synergistic to the toxin. Stimulants should be freely used when indicated. Administer water as soon as possible and continue to use it freely until convalescence.

In closing this study I wish to emphasize that it is in overheated infants that the utmost care should be taken to use sterile foods. Our vigilence in these cases must be unceasing, for even mild forms of infection lead to fatal results, since the digestive process is unable to cope with them.

Very recently Getty,[29] after a study of the cases of summer diarrhea as it occurred in Yonkers, arrives at the conclusion that the direct effect of heat is not a very potent factor in summer mortality, but an observer who sees patients in a city where the heat is never or very rarely over ninety degrees, is hardly in a position to make this statement. While we cannot deny the effect of high temperature in causing an enormous increase in bacteria and thus contributing to the death-rate, still the study of my cases seems convincing that a temperature of ninety-two degrees or more, by producing thermic fever, is a powerful predisposing factor.

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ACUTE PSORIASIS IN AN INFANT.*

By R. Abrahams, M.D.,
New York.

IN the latter part of December, 1897, Mrs. S. brought her child to my skin class at the Zion Hospital Dispensary, giving the following history: Her baby-boy was about twelve weeks old, enjoying a good appetite, regular bowels and undisturbed sleep. When it was seven weeks old a "rash" appeared on its body, arms and legs. The eruption was unattended by fever, malaise, vomiting, itching or smarting. The baby did not show the least discomfort in consequence of its appearance or presence. Experienced matrons took an indifferent view of it, as it was "only chicken-pox." The condition which forced the mother to seek medical advice was a severe erythema intertrigo, from which the infant suffered for a week or more. This lesion extended over the pubis, genital organs, inner surfaces of the thighs and the lower half of the buttocks. On close examination and enquiry the eruption which appeared at the age of seven weeks was of a punctate papular character, showing itself first on the elbows and knees, then on the extensor surfaces of the limbs and lastly on the body. The papules were scattered and sparse, but, save the palms and soles, they were universal. They are at present decidedly psoriatic, being infiltrated, sharply defined and covered with silvery scales which are easily removed, and when so removed leave a punctate bleeding surface.

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* Presented before the Eastern Medical Society, January 14, 1898.

The lesion was carefully differentiated from syphilis, eczema and seborrhæ. Any of the exanthemata was entirely out of the question. I may mention apropos that the intertrigo was cured in a short time under appropriate treatment.

The interesting feature of this case and really the only one which prompts me to report it is the age of the patient. Psoriasis as a skin affection is common enough, but its occurrence in so very young an infant is, as far as I know, extremely rare. Crocker, in his work on diseases of the skin, states that he "has seen but one case aged two years; Elliot records a case eighteen months old, and Kaposi mentions one eight months old."

AN UNUSUAL FORM OF FACIAL PARALYSIS.

By W. S. Melsome, M.A., M.D., Camb., F.R.C.S., Eng.
Assistant Surgeon to the Royal United Hospital, Bath.

WHILE removing the cancellous tissue from the mastoid bone for middle-ear disease in a girl four years of age, I exposed the facial nerve in the vertical portion of the aqueduct. On recovering from the anesthetic the right side of the face was paralyzed, but the only noticeable feature while the muscles were passive was a slightly wider separation of the eyelids on the right side than on the left. At 9 P. M. the same day the child was asleep with both eyes absolutely closed; on the following morning, however, no effort could effect more than a partial closure of the right eye.

She remained in the hospital for five weeks, and throughout this period voluntary efforts to close the eye were unavailing; every night, however, during sleep, the lids were quite closed, no chink whatever existing between them; this I considered to be a hopeful sign. After five weeks at a convalescent home she returned with all voluntary movements perfect.

This phenomenon of complete closure of the lids during sleep, with inability to close them voluntarily during the waking hours, must, I think, be rarely seen, and is difficult to explain satisfactorily.

Many children habitually sleep with the eyelids a little apart, possibly because the involuntary muscular fibers of the elevator are more abundant than usual or are not completely relaxed during sleep, and in order to obtain complete closure of the lids some slight action of the orbicularis is necessary, and this of course can only occur when the child is awake.

In most persons, during sleep, when the elevator is in abeyance, the closure of the lids is probably brought about by the natural tone of the orbicularis.

The child in question habitually sleeps with the eyelids completely closed, and the bruising of the facial nerve during the operation was perhaps so slight that while voluntary impulses were unable to travel along it, yet the trophic influence of the nucleus was not completely cut off, so that the orbicularis retained its tone, but was unable to fully assert itself except when the elevator was in complete abeyance, which we may suppose only occurred during sleep, voluntary relaxation, when the child was awake, not being so complete.

Sometimes, in children with complete paralysis of the third nerve, and therefore of the elevator, we see the eyelids of the paralyzed side completely closed, not only during sleep, but also while awake, and this observation favors the view that in most persons the closure of the lids during sleep is due to the unopposed tone of the orbicularis.

SOCIETY REPORT.

THE CLINICAL SOCIETY OF LONDON.

Meetings held on November 12 and 26, 1897.

Calot's Operation.—The subject of Calot's operation for the immediate reduction of angular deformity of the spine was introduced in a paper by Mr. A. H. Tubby and Mr. Robert Jones. Their remarks were based on a series of twenty-five cases treated by this method. They had at first regarded such a novel procedure with considerable skepticism, but the results witnessed by them at the cliniques of Calot and Redard had induced them to give the method a trial. Examination under chloroform had led them to classify cases of spinal deformity from the point of view of such treatment into three classes:

1. Those reducible by traction without direct pressure.
2. Those reducible in from one to three minutes and requiring direct pressure as well as traction.
3. Those permanently ankylosed and not reducible by justifiable force. Cases coming into this division were therefore not suitable for Calot's treatment. The advantages of the operation were manifested in the greater ease with which the spine could be fixed in position after it was straightened, and the avoidance of deformity of the chest, with compression of the thoracic viscera. Some paralysis was naturally expected on theoretical grounds, but it had not occurred in their experience; on the contrary, five of the patients with paralytic symptoms showed signs of improvement in that respect from the time of the operation. Dissemination of tubercle, formation of abscesses, and other complications had not occurred in their cases. Calot thought that from nine to twelve months' fixation of the spine would be required after the operation, but the authors were inclined to think that from two to three years would be necessary. The details of the operation were described and illustrated by lantern slides. The extension should be equable and not jerky, being applied at the head and the feet. Summing up their results, they had had only one death in the twenty-five cases, and that had occurred six

days after the operation. Death had occurred suddenly with acute abdominal symptoms, but no explanation was forthcoming at the necropsy. Five had paralysis and all of these had improved apparently as the result of the operation. Ten cases were reduced at the first sitting and fifteen partially. Of the latter, two required two subsequent operations, one required three, and the remainder were not further treated, but the spinal deformity was much improved by the single operation. They considered a case was unsuitable for this operation if the disease was of long standing, or if ankylosis had taken place, or if there was considerable deformity of the chest, or if active tuberculous disease was present elsewhere, or if abscesses had occurred. On the other hand they regarded as suitable (1) those occurring in young subjects in whom the angle was a changing one, the disease was of short duration, and firm ankylosis was absent; (2) those with active local disease, (3) those without visceral complications, (4) those presenting paralytic symptoms which did not yield to ordinary treatment.

The President (Mr. John Langton) recalled the fact that Professor Sayre, of New York, had advocated forcible extension for the rectification of this deformity twenty-five years ago, but this treatment was not in favor with English surgeons. He thought that some of the cases related might have been cured by prolonged rest in bed, the deformity being so slight. As the extent of the curvature was not considered in this treatment, he wondered how, in cases with destruction of the bodies of several vertebræ, the large gap left was to be filled up.

Dr. Calot gave some statistics as to the results of his treatment. In his first series of 37 cases there had been no bad symptoms following the operation. Redard had had 32 cases, and Hoffe 36 cases without any mishap. Jones had had one death in 60 cases. Brun and Jenesco lost a child under chloroform, Malherbe one from respiratory embarrassment, and from the same cause Bilhaut lost 3 out of 50 cases, and Calot himself 2 out of close on 300 cases. Out of 600 cases reported to him by various surgeons, paralysis followed the operation in 3 cases, and pre-existing paralysis was much relieved in 8 cases. This operative treatment transformed a closed tubercular cavity into an open one. The correction of the deformity was no more serious than the rectification of a deformed joint. Chloroform might be dispensed with if considered advisable. An abscess or a fistula might have to be treated previous to the employment of forcible reduction. Ankylosis was not an absolute contra-indication to this treatment, but the extent of it must be determined. If traction were necessary to the extent of 50-80 kilos, then partial ankylosis was present, and this amount of force should not be exceeded as a rule. In extreme cases it was better to repeat the operation rather than force the reduction at one sitting, and even horizontal section of the laminæ might be necessary.

Mr. R. W. MURRAY (Liverpool) had performed this operation in 14 cases, the ages of the patients ranging from 2½ to 9 years. In one of his cases death had ensued from pneumonia, probably unconnected with the operation; in another general tuberculosis had developed, and in a third weakness of the lower limbs had supervened. He thought the prognosis was not good, as the deformity would probably recur. Judging from the analogy of what occurred elsewhere in tuberculous disease of bone, he was doubtful as to whether much new bone would be formed. In one case, which terminated fatally after mechanical correction, a large gap was present in the anterior part of the spine.

The Honorary SECRETARY read a communication from Dr. Redard, of Paris, who was unable to be present. He was convinced, from an experience of 40 cases, that the operation, when carefully carried out, was effectual and free from risk. Neither the size nor the duration of the deformity was a contra-indication, but the method should not be employed for irreducible ankylosed curvatures. He sent photographs of the apparatus he employed in effecting reduction, by means of which the exact amount of traction was measured and assistance could almost be dispensed with. He had met with no unfavorable results in his series of 40 cases.

Mr. WATSON CHEYNE did not think the matter was yet ripe for discussion. From an orthopedic point of view, the demonstration was successful. The deformity treated was not the disease, but the result of disease. He was surprised at the absence of serious complications after operation as compared with the results of employing forcible measures in the treatment of tubercular joint disease. The patients, however, could not yet be regarded as out of danger, for abscesses may form very slowly. To obtain a cure in such cases of spinal disease it was necessary for the tuberculous tissue to disappear and for bony ankylosis to take place. As regards the first of these conditions he did not expect it on the analogy of tubercular disease generally, but rather that one or more cavities would form in front of the spinal column. Any new tissue thrown out would tend to become tuberculous. Nor did he expect that ossification would occur between the bodies of the vertebræ after they were widely separated. The new formation of bone in tuberculous disease was always very slight. If the operation were performed he thought it would be well to follow Calot's plan of freshening the adjacent edges of the laminæ of the vertebræ and uniting the periosteum at the same time. This method of treatment was absolutely on its trial, and as several years must elapse before the results could be definitely ascertained, he thought surgeons might now hold their hands, a sufficient number of cases having been treated to determine the value of the operation.

Mr. Barwell thought the results of the treatment must be carefully watched. He wished to have some more details as to the condition of the spine in cases which terminated fatally.

Mr. Noble Smith asked what would be the condition of the patients in two years' time? The writers could not say, as all of their cases had been too recently treated. He himself had seen in two cases the results of active spinal treatment, after the disease had become quiescent under rest, etc.; in one abscesses formed and continued to do so until the patient's death, and in the other general tuberculosis and death followed. He compared the results of this rapid reduction method with those obtained by rest to the spine and extension, gently and gradually applied, and thought the results obtained from the latter were very satisfactory.

Mr. Jackson Clarke thought the adoption of this method of treatment was partly due to the fact that Sayre's jackets had not proved satisfactory. The curvature might increase as the child grew older without the presence of active disease—as the mothers expressed it, "the hump grew with the child." He had tried the immediate reduction operation in the case of a girl with a sharp angular curvature, and found that the straightening was easily effected by extension rather than pressure. He thought that Mr. Jones' splint confined the whole body too absolutely, and that the effects of this for two years might be serious. He preferred to apply fixation for three months, then adjust a Chance's splint and allow the child to go about.

Mr. W. G. Spencer considered that this preliminary report on Calot's operation would stimulate treatment of a more active kind than that usually adopted. There was no evidence of any serious results following immediately. He thought that repair would go on as well in the straight position as in the bent, and especially ossification could be aided by the anterior common ligament.

Mr. Cotterell had operated by this method in two cases. The first was a child who had been treated for five months for dorsal caries and paraplegia without improvement. The curvature was reduced in October and the paraplegia had been steadily improving since then. In carrying out the treatment the position of the child rendered the administration of an anesthetic difficult and at times dangerous.

Mr. Melwall Thomas (Liverpool) thought that arguments based on museum specimens were often misleading. As regards Calot's treatment, the dangers anticipated had not come to pass, and the great objection now raised was the filling up of the "gap." But nature had filled up many other gaps and was probably equal to doing it in this case. He had done the operation himself, and had seen others do it, and thought the results obtained were better than those from the old treatment.

Mr. A. E. Barker agreed with every word that Mr. Cheyne had said, and thought that surgeons might now wait until the results could be finally determined. He recalled a case in which a patient was suspended for the application of a Sayre's jacket, and this was followed by the bursting of an abscess into the pleura, and death. This was probably caused by the rupture of the anterior common ligament, and such an occurrence was quite likely under Calot's treatment. He questioned the probability of there being much new bone formation to strengthen the spine. Accepting Calot's analogy of the forcible straightening of a tubercular knee, he should certainly expect extension of the disease if this were adopted, and thought that that was the general experience of surgeons.

Mr. Jones, in reply, expressed his satisfaction with the full discussion which had taken place, but regretted the pessimistic tone. He reminded the society that this was a preliminary report regarding a form of treatment which was not only new but was opposed to all traditional practices and beliefs. The theoretical objections had melted away before the actual clinical facts, and now the dangers anticipated were not immediate but remote. He accepted with much pleasure the president's invitation to show the cases when sufficient time had elapsed.

Mr. Tubby, in reply, said he could not admit that they were treating a symptom and not the disease, for they were separating diseased surfaces, as was done in other operations. He was hopeful of osseous formation taking place, as the habit of the spine was to ankylose by bone, just as of joints by fibrous tissue. He saw no reason for ceasing the treatment until later results had been observed, as long as no danger or undue risk was incurred.

ABSTRACTS.

THE ASSIMILATION AND USE IN CHILDREN OF THE FAT CONTAINED IN CHOCOLATE.

Bendix (*Memorab., 1897, xv, 376*). There are many healthy children who are with difficulty induced to eat meat, eggs, etc., during their second year, when passing from breast milk to a mixed diet, but who do not find at this age sufficient nutriment in milk alone. We also meet with individual cases, in which a disinclination for a pure milk diet is already manifested during the first year of life, and in which bodily development begins to suffer. Aside from this abnormal condition of healthy children we meet with a great number of sick children, who on account of diseases, as anemia, scrofula, atrophy, rhachitis, incipient tuberculosis, or as a result of previous acute infectious diseases, assimilate a deficient amount of albumin and fat or even show a decline in the constituents necessary for their maintenance and growth. The question now arises, whether we are able to obtain in these cases an appreciable increase in nutrition, at the same time satisfying the sense of taste. Up to the present, fat seems to be particularly well fitted to play an important rôle as a means of increasing nutrition; it affects the accumulation of fat, thus saving the albumin, besides being the most concentrated of all foods; that is, it is able to convey to the animal the largest quantity of nutriment in the smallest bulk. Finally, the digestion of fat is accomplished with the least expenditure of force. For a long time the administration of brown cod-liver oil has been found an excellent dietetic measure in weakly children and in those who stood in need of more nourishment; its great value is undoubtedly due to the large amount of free oleic acid it contains, therefore exerting much greater benefit than the white oil, which is poor in oleic acid. As cod liver oil, on account of its disagreeable taste and smell, is taken with disgust, and frequently causes digestive disturbances, some substitute was looked for, and v. Mering found the latter in lipanin (olive oil mixed with six per cent. of free oleic acid), and in Hauswaldt's *Kraft-chocolade*, to whose cocoa butter a certain quantity of oleic acid is added. Bendix undertook a physiological experiment in a healthy four-year-old child, by which he demonstrated that a very appreciable assimilation takes place in the intestine of the child (92.3—95.38%). By comparative experimentation it was found that the cocoa butter is absorbed at least equally well as cream. Control experiments also demonstrated, that common chocolate free from acids is very well assimilated. The latter, however, though a very useful vehicle for fat in the healthy child, should be replaced by the chocolate containing oleic acid, in addition to the administration of a certain amount of fatty food, where it becomes necessary to increase nutrition by large doses, or to assist the intestine in its function of absorption by an emulsified fat. BENDIX was induced by this to make feeding experiments with Hauswald's *Kraft-chocolade.* For this purpose he employed children from one to four years of age without selection, the greater number of whom were convalescing from some infectious disease or were suffering from rhachitis, scrofula, anemia, bronchitis and catarrh of the intestine. During the experiment they were kept in the same surroundings and were given the same food as before; added to this, however, was a certain quantity of chocolate, 25-50-125 g. pro die, according to the age, appetite and inclination of each child. All of them ate the chocolate with great relish, and would have taken more than they received. Nausea, vomiting, distress of the stomach or disturbance of the digestion did not occur in a single case. The stools, which had frequently been insufficient, usually became regular and soft after a few days; diarrhea was never observed.

The weighing of the children, which was continued for weeks and months, gave the distinct impression that the *Kraft-chocolade* was an excellent food.

MODERN MANAGEMENT OF DIPHTHERIA AND CROUP.

Dr. CAILLE has an article with this title in the *New York Post Graduate* for October, 1897. He speaks first of the importance of bacteriological examination in diphtheria, but says that specific treatment (antitoxine) should be used first, and specific diagnosis secured in all cases of follicular tonsillitis where any doubt exists.

The spread of diphtheria can be prevented (1) by state action and (2) by personal attention to the toilet of the naso-pharynx in persons exposed to infection. When a case does occur, treatment is (1) antitoxine, which should be given promptly and in sufficiently large doses; (2) local supplementary measures, which should always be mild. Liquid disinfectants should be poured into the nose with a spoon, or in case of partial or complete occlusion of the nostril, a blunt piston syringe may be used. Any one of a number of solutions may be employed: permanganate of potash, a rose colored solution; mercuric chloride, 1:10,000; listerine, 1:10; lime water, salt water and alum water being among those suggested. In case stimulation is needed, whisky, coffee, strychnine, gr. 1-50, three times a day; camphor, ½ to 1 grain, three times a day, may be given. Temperature can be reduced by cold or luke-warm sponge or tub baths. The regular two hour administration of antipyretics is bad practice, but two or three doses in twenty-four hours, particularly at night, are serviceable. Lactophenin or phenacetin, 3 to 10 grains, with ½ grain of caffeine, will be found useful. Antipyrine is also safe, and may be given per rectum.

In cases of incessant vomiting all internal medication should be stopped. The stomach may be washed out, or 1 to 2 drops tincture of iodine in sweetened peppermint water may be given. The diet should be changed in case diarrhea is a complication. Tannic acid or tannigen, acetate of lead with sugar of milk, camphor ($\frac{1}{2}$ grain) with 1-5 grain Dover's powder, may be necessary. For albuminuria and nephritis, promote diaphoresis, and also elimination by the bowels. Initial convulsions indicate intense infection or nervous reflex irritability; an enema, a warm bath and chloral hydrate, gr. iii, and potassium bromide, gr. v, are indicated. Terminal convulsions require stimulation. The eyes and ears should be kept clean to avoid complications. Direct cauterization is the best way to treat hemorrhage from sloughing tissue. Phlegmon of the tissues of the neck should be freely opened and drained. Paralysis and ataxia are best treated by fresh air, baths, massage, the interrupted current, strychnine and nutritious diet.

Croup.—In practice we recognize (1) the croupy cough, which yields to the mildest treatment; (2) pseudo-croup, of which the croup of measles is characteristic; (3) true croup, which is either primary membranous laryngitis or is secondary to diphtheria. About 80 per cent. are known to be cases of Klebs-Lœffler diphtheria. Treatment recommended in croup with urgent stenosis is (1) antitoxine, (2) intubation, (3) tracheotomy. The proper precautions concerning isolation and disinfection are, of course, to be taken. The child should not return to school until the bacilli have disappeared from the throat, where it is possible to have culture examination, or until three weeks after the disappearance of all clinical symptoms.

ABNORMAL RESPIRATION IN INFANTS FROM OBSTRUCTION IN THE UPPER AIR PASSAGE.

Respiratory obstruction, occurring as it does with so great frequency in early childhood, may be regarded as one of the most important of pediatric subjects. The symptoms, effects and treatment vary with the nature, degree and location of the obstruction.

Laryngeal obstruction, the most important, may be caused by malformations of the larynx, by new growths, foreign bodies, inflammations, membranous exudates, reflex spasm, paralysis, or pressure from without, as in retroesophageal abscess, etc. Diagnosis should be made by direct and laryngoscopic examination of the larynx, or the X-ray if necessary. Inflammatory conditions are distinguished by the presence of fever, the symptoms of the disease, or the history of the causative accident. Klebs-Lœffler bacillus may be found. Absence of fever and transitory character point to the functional nature of the reflex spasms. The causes should be sought for, as should causes of compression. In treatment, often four agents must be used—the antitoxin syringe, the O'Dwyer tubes, the laryngeal forceps and the knife. The operative procedures should be first practised on the cadaver. Laryngotomy is to be employed only as a last resort. Foreign bodies often require tracheotomy. When a progressive, urgent dyspnea, accompanied by anemia and asthenia, arises in the course of acute disease, it is best to administer antitoxin. Intubation may be required in membranous edematous, spasmodic and cicatricial stenosis. The ordinary catheter may be used in any form of dyspnea when O'Dwyer's tubes are not at hand. Spasmodic stenosis should be relieved by chloroform, codeine, chloral, bromides or other antispasmodics, and by the removal of the reflex cause. Pressure stenosis is to be treated by removal of the body causing the pressure.

Pharyngeal obstruction is due to hypertrophied tonsils, peritonsillar and retropharyngeal abscesses, elongated uvula, cicatricial contraction and foreign bodies. Foreign bodies, excessively enlarged tonsils and elongated uvulæ should be removed; abscesses should be opened. The pharynx should always be explored with the finger.

Nasal and retronasal obstructions give rise to symptoms of a different order. Mouth breathing, defects of hearing, smell, articulation and respiration are present; the growth and development of the body is interfered with, and the lungs, ears and eyes are prone to catarrhal inflammations. Anemia is almost constant. The causes, apart from malformations, may be foreign bodies, fractures, diphtheritic membranes, syphilitic lesions and collapse of the *alæ nasi*. In the nasopharynx there may be the adenoid vegetations.

The symptoms are snoring, restlessness, night terrors, post-nasal, nasal, bronchial, aural and conjunctival catarrh. The infant presents an expressionless face; the voice has a dead, nasal character. Diagnostic procedure should begin with an examination of the nasopharynx. The examining finger will meet the soft pendant growths, and will be stained with blood by them. In infants under six months, an applicator armed with a cotton nob, introduced behind the palate or through the nose, causes these masses to bleed. Intranasal obstructions are comparatively rare in infants. Unilateral occlusion with purulent discharge usually means the presence of a foreign body. In diphtheria the anterior nares are usually excoriated and covered with a thin pellicle. The Lœffler bacillus is always present.

Practically, the treatment of nasal obstruction in infants means removal of retronasal adenoid growths, which should be complete.—J. J. CONCANNON (*Jour. Am. Med. Assoc., Dec. 18, 1897*).

ABUSE OF INFANTILE TREATMENT.

H. NEUMANN (*Deutsche Medic. Ztg., 1897, xviii, 207*) first discusses the question as to the necessity of a bath in the new-born. The child is born much cleaner than appears at first sight, and nearly without exception is steril; the vernix caseosa is an excellent protective covering, not subject to disintegration, and we ought not to be so very solicitous about removing it as soon as possible. The bath, as well as the hands of the nurse may be the cause of infection of the wound of the navel; as we are now striving to reduce the virulence of the bacteria deposited on the wound of the navel, would it not be better to prevent their entrance and growth? It would be better to do away with the bath until after the cord has fallen, so as to obtain a rapid and thorough mummification of the latter. The first bath is perhaps of less consequence; its danger might probably be modified if the child was first thoroughly soaped and sponged. If we do insist on the first bath, we ought for a time to dispense with the others. The navel is to be treated in the following manner: Immediately after birth the cord should be tied as low down as possible, so that a stump of only about 1 cm. is left; this should be covered by some cotton which is to be removed for the first time on the third day, and then changed every other day until the stump has fallen. Only after this has occurred should the child be daily washed and bandaged. In this manner it was possible at the maternity clinic of Budapest to obtain a record in which out of 230 new-born, only 3.5 per cent. contracted an inflammatory infection of the navel, and 11.9 per cent. were not infected at all, while the percentage formerly was 22 and 45 respectively. Keilmann demonstrated in 400 new-born children that inflammatory infection of the navel could wholly be prevented by the dry treatment. Bathing the newborn may also act injuriously by cooling infant too much. The heat of the child after birth only gradually diminishes; when placed in a bath during the first days of life a rapid fall of temperature is induced, which is only equalized again after a few hours. The new-born who are not bathed also increase more in bodily weight than those which are bathed.

Neumann then directs attention to the too energetic washing of the infant's eyes; purposely wetting the conjunctival sac may not infrequently be the cause of more or less irritation; of course cleansing of the eyes after birth and the prophylactic treatment of conjunctival blenorrhea is excepted. The justification of cleansing the babies' mouths is also questionable; its object is to ward off processes of disintegration and the occurrence of stomatitis. In healthy and robust infants, at least, while the teeth are yet absent, there is nothing to be seen of disintegrating processes; as in stomatitis, the cleansing of the mouth not infrequently causes some lesion of the mucous membrane, and furnishes a proper point of entrance to this disease. A severe stomatitis in the infant is nearly always to be traced to a mechanical irritation in washing the mouth. Although it is generally harmless, it may by deep ulceration attack the jaw bone and produce necrosis. The abuse of surgical methods is found in dividing the frenum linguæ; out of fear that the child may not be able to nurse, and later not be able to talk, the frenum is not only cut once, but sometimes even twice, the determining test being whether the child nurses well or not. If the child is not able to suckle well, we are to investigate whether there be not a sufficient reason for it, either in the child or its mother, aside from a tightly stretched frenum.

Of much greater importance is scarifying the gums, as a consequence of difficult dentition. A careful examination of the child, and the knowledge gained thereby of any existing affection, will lead to a modification of the term difficult dentition, and will reveal in its place diseases of the most various organs, as for example, acute catarrh of the upper air passages, inflammation of the middle ear, a beginning cerebral disease, tetany, dyspepsia or intestinal catarrh, etc. This warning of the abuse of treatment in the infant includes therefore the demand to observe with the greatest care all incidents in the life of the infant, and to treat them according to the indications thus obtained.

A CASE OF MOTOR APHASIA IN A CHILD OCCURRING IN THE PRODROMAL STAGE OF AN ACUTE EXANTHEM.

M. Bratsch (*Berlin. Klin. Wochensch., 1897, xxxiv, 30*), after minutely relating the history of the case, which occurred in a girl three and three-quarter years of age, goes on to make the following comments: The case is of great practical interest. Bratsch looks upon the case as an *atypical scarlatina* in its commencement. Cases of aphasia are by no means rare in childhood, and according to Bratsch's experience they occur at least as frequently in the adult, for the reason that the brain of the child reacts much more easily than that of the adult to an irritation of any form. In its *etiology* the *infectious diseases*, and especially the acute ones, play the greatest part, and in these again typhus abdominalis the greatest; more rarely does acute rheumatism, pertussis, intermittent fever, diphtheria, variola, morbilli and scarlatina come under consideration, the latter most infrequently. Aside from this, we find that *post-scarlatinal disturbance of speech* usually presents an altogether different pathogenesis from the case described, as at other times these made their appearance with symptoms of *uremia* in the course of a *scarlatinal nephritis*, and were usually accompanied by hemi-lateral paralysis. This must of course be taken into account, mainly in the *prognosis*. Aphasia following typhoid fever presents, as compared with post-typhoid psychoses, a very favorable prognosis, as it usually occurs isolated and not accompanied by any other paralysis. The previous case, where we have to deal with a case of scarlatina, is still a unique one, and therefore does not justify us in drawing prognostic conclusions. However, in those cases in which post-scarlatinal aphasia appeared in the train of a nephritis, with hemi-lateral paralysis, the prognosis was by no means as unfavorable as was to be assumed, as an organic lesion must certainly have been present; the aphasia frequently disappears, often alone, occasionally together with the hemi-lateral paralysis. It goes without saying, nevertheless, that in cases like this one the prognosis must be looked upon as very much more favorable; this should be emphasized, as in these cases of aphasia the anxiety of the parents will be much greater.

For what reason therefore is the prognosis so favorable in this severe cerebral affection? In the first place, experience teaches us that the child's brain is very easily thrown out of its "*labile equilibrium*" by injuries which leave no trace in the central nervous system of the adult (fever, helminthes, indigestion, etc.), so that we are justified in concluding that the functions of the child's brain are inclined, in view of the "lability" which is present in it, and its ability to conform to circumstances, to return very rapidly to their state of rest. Of greater importance still is the fact that a process which occurs only in exceptional cases in the adult seems to be the rule in the growing brain of the child: namely, that *after the destruction of a part of the brain another portion may vicariously take its place.* It is true that in the brain of the child localization of the individual centers is by no means so firm. Sachs has shown that in children aphasia accompanies left-sided paralysis at least as frequently as it does right-sided, from which it may be seen that children *talk with both hemispheres,* and only in later years (probably only after a marked appearance of right-handedness) speech becomes "left-brainy." Therefore, if we may speak of a vicarious substitution (perhaps of the right hemisphere) in older individuals, whose speech center has been permanently destroyed and who again learn to speak, the matter in children rests this way, that in unremedial destruction of Broca's convolution the motor function of speech begins with exactly the same rapidity to attach itself to another portion of the brain. That in this case the age of the patient will play a part, even within the years of childhood, is sufficiently clear, and we will have to take for granted that in children, as the age advances, the adjustment becomes more difficult.

CONTRIBUTION TO THE STUDY OF INFANTILE PARALYSIS.

OSC. WYSS (*Correspondenzbl. f. Schweitzer Aerzte, 1897, xxvii, 271*) reports the following cases of infantile paralysis:

(1.) A case of right lateral facial paralysis and left lateral paralysis of the extremities. As the latter improved and the first remained stationary, and tumor, hemorrhage, embolus and peripheral facial paralysis could with positiveness be excluded, the author assumes the presence of a *poliencephalitis* located in the *pons.* Electrical reaction was normal. No atrophy.

(2.) A case of paralysis of the *iliohypogastric nerve,* motor portion added to a spinal paralysis of both legs; great convexity of the abdominal parietes almost simulating a hernia immediately below the arch of the ribs, extending between the continued posterior axillary and nipple line, down to the rim of the pelvis, with a normal condition of the lower abdominal region, between umbilicus, anterior superior spine and the symphysis.

(3.) A case of paralysis of the motor portion of the ilioinguinal nerve, also paralysis of both legs. An analogous though smaller and more circumscribed hemi-globular convexity of the abdominal walls, which were in this case lax between the anterior superior spine, the umbilicus and the symphysis, was present.

AN INFECTIOUS EXANTHEM FOLLOWING ACUTE ENTERITIS MEMBRANACEA.

Galliard (*Berlin Klin. Wochensch., 1897, xxxiv, 262*) observed in a five-year-old child a papular exanthem, which was accompanied by fever, and which gradually extended over the whole body. Calomel had been previously administered, and irrigation of the bowel with boric acid solution had been practised. After nine days the eruption disappeared, accompanied by scaling of the skin. Albumen was found in the urine on one day. The bacterium coli was demonstrated in portions of the intestinal mucous membrane. Galliard looks upon this erythem as a symptom due to a bacillary infection, such as we meet with also in typhoid fever and cholera. Levestre upheld this opinion, and pointed to the fact that such forms of erythema are frequently observed in children suffering with digestive disturbances; Le Gendre, however, believed it due to the effects of calomel.

DIPHTHERIA OF THE UPPER AIR-PASSAGES AND ITS RELATION TO CROUP.

C. Rauchfuss (*Arch f. Laryngol., etc., 1896, v. 79*) had under his care during the four years, 1892-1895, 1,236 patients who suffered from acute anginas and laryngotracheitis (exclusive of those which occurred as a sequel to the exanthematous diseases), in which a systematic bacteriological examination was made. The following conclusions are drawn from an exact analysis of this material: *Pseudo-membranous* angina, where its *diphtheritic* character was demonstrated, was complicated with croupy symptoms in somewhat less than one-half of the cases, and with membranous croup in a little less than one-third of the cases; *non-diphtheritic* pseudomembranous angina was complicated with croupy symptoms in four-tenths of the cases, therefore in a similar proportion, but only in one-fifteenth of the cases with membranous croup. Furthermore: Primary diphtheritic croup could be referred with certainty to a membranous laryngotracheitis in at least nine-elevenths of the cases; the non-diphtheritic variety, however, in about one-fifth of the cases. In the presence of a *diphtheritic* pseudomembranous angina, accompanied by croupy symptoms the chances, according to the observations recorded that we had to deal with membranous croup, were three times as great (57.17 per cent.) as in the non-diphtheritic angina with croup, while they were only one-third as great (25.83 per cent.) where a catarrhal croup (severe inflammatory laryngitis,

laryngitis acuta subchordalis) was present. Rauchfuss, however, particularly emphasizes that he can only admit these conclusions with some reservation, because a series of diseases distributed over four years must be dependent on temporary and local conditions. As regards the part taken by the severe catarrhal form of croup, the laryngitis subchordalis acuta, in the occurrence of croup, accompanying diphtheritic anginas, the diphtheritic croup was in only a little more than half the cases undoubtedly pseudomembranous, and we are not justified therefore in looking upon every case of croup making its appearance during the course of a pseudomembranous diphtheritic angina as membranous, although the stenosis may be so great as to demand operative interference.

ON THE IMPORTANCE OF THE PHENOMENA FOLLOWING THE INJECTION OF ANTIDIPHTHERITIC SERUM.

Bose (*Die Therapie der Gegenwart, 1897, xxxviii, 268*) mentions the sequelæ following the use of antidiphtheritic serum, of which the rise of temperature, the disturbances of circulation and the occurrence of albuminuria are of especial interest to the physician. Are these symptoms dangerous, or do they not influence the prognosis at all? If we study the effect of a certain series of materials, as for example the normal serum and its contained coagulating substances, we find a rise of temperature of 1.0 to 1.30°, and a well-marked increase of the pulsations of the heart following its injection. The anticoagulating substances will act in the same way. When an injection of extract of leeches is made into the vein of a dog, a rise in temperature and a great increase of the heart's action will take place. Chloride of sodium has the same property, and will cause a true attack of fever, with rapidity of the heart's action, in healthy animals, but it is remarkable that these phenomena, although energetic, are of short duration; a proper reaction is necessary. If a solution of chloride of sodium is injected into the veins of a dog previously infected with the bacterium coli (Bosc and Vidal) we can still induce a rise of temperature and a rapid heart-action, but this increase of temperature is much greater and always lasts only a few hours, and if an increase of the heart's action takes place a corresponding increase in the blood pressure will also follow. We are dealing with a true critical curative, and even prophylactic reaction of the organism. Just so is it with other substances, and in diphtheria the fever and heart-symptoms are of the same value. The symptoms following the injection of the serum may therefore be of prognostic value, but to be favorable the reaction must be regular; the fever must not last longer than four to six hours (critical fever) and the increase of the heart's activity must be accompanied by a permanent increase in the blood-pressure. The prognosis, on the contrary, is unfavorable in cases where the high temperature persists and the increase of heart-action is accompanied by a marked diminution in blood-pressure. In regard to the albuminuria, the prognosis must be guarded; it may be produced in healthy rabbits with normal serum, but does not continue long; it is also caused by diphtheritic serum, but not in all cases; if albuminuria makes its appearance in man from the injection of antidiphtheritic serum, we are unable as yet to give a prognosis from this. This point is still to be determined by a careful experimental and clinical study.

GASTRIC AFFECTION AND GRAVE NERVOUS DISTURBANCES IN A CHILD, CAUSED BY ASCARIDES.

G. VARIOT (*Deutsche Medic. Ztg., 1897, xviii, 64*) says: Leaving aside the continuous deleterious influence on the nutrition which intestinal worms induce by abstraction of a portion of the patient's nutrition, and by changing the constitution of food through their products of metabolism, these worms may also occasion slight or severe acute diseases. In every unusual disease, the etiology of which cannot be determined, the presence of worms should always be borne in mind, and the proper measures for their removal taken.

The case reported by the author concerns a young girl seven years of age, who was in the stage of convalescence after an attack of measles, which had run a usual course, and who suddenly became ill again with a rise of temperature to 40°. This new attack consisted in the immediate vomiting of all food offered her, after a few dry coughs. The bowels were constipated and had to be moved with clysters. A few days later insomnia, grinding of the teeth and a feeling of heat were added. The child carried out movements of extension from before backwards, with the arms and hands, rubbed its nasal orifices frequently and bit its lips. After the administration of an enema of milk, an ascaris lumbricoides was expelled, which led Variot to order a large dose of santonin (20 cgrm.) and five minutes later 30 cgrm. of calomel. At the same time an icebag was placed on the pit of the stomach and the following mixture prescribed:

R	Aquæ destill	100.00
	Natr. bromat	2.0
	Cocain hydrochlorate	0.10

M. D. S.—A tablespoonful every hour.

Result:—The expulsion of two large round-worms; otherwise absolutely no change. On the next day the child again passed a round-worm and retained some bouillon and some iced drink. The previously mentioned dose of santonin was twice again administered at intervals of two days, with the same result. After nine round-worms had been expelled the child improved so far that the fear of cerebral disease was totally dissipated, and the disease could with perfect assurance be ascribed to the presence of ascarides. The child recovered perfectly under a continued treatment with santonin. The most remarkable thing in this case was the stubborn intolerance of the stomach. The reporter takes for granted that the round-worms, which by preference inhabit the small intestine had entered the stomach in this case, and disturbed it to such an extent that it became incapable of retaining food.

DEMONSTRATION OF AN UNUSUAL CASE OF ATROPHY.

PELIZAEUS (*Deutsche Medic. Ztg., 1897, xviii, 68*) showed a girl five years of age who presented an abnormal and rather unusual picture. Her build was normal, nothing unusual was discovered about her head. There were no paralyzed muscles here; bulbar or cerebral symptoms were absent. In September, 1895, the child was perfectly healthy, but the mother noticed that she could not walk well. She was admitted to the clinic at Halberstadt, where she was fitted with a knee-splint, as this was supposed to be affected. This was worn until November of the same year. At that time she presented the same symptoms as at present. When the child walks she is unable to bring the heel of the affected limb to the ground. She walks on her toes, and is only slightly incommoded. The left hand is also affected; she is, however, able to knit well with it. The disease with which we are here dealing is an atrophy of the left lower extremity, which first appeared in a certain difficulty on walking, as a slight valgus, and which extended further, the child now presenting a high degree atrophy of the leg involving the skin, fasciæ, muscles and the ligaments of the joints. Aside from this, the skin also presents depressions and discolorations. She is unable to move the foot. Besides the brownish discoloration there are peculiar, light, glistening, variable hued portions, which gradually made their appearance. The tendons of the leg resist extension, foot phenomena are absent, the child being able to move her toes well. The affected leg presents quantative weakness for both currents; a qualitative difference is not present. The affection, which made its appearance in the leg first, has extended to the hand. There is present stiffness of all the fingers, with the exception of the thumb. There are found the same cords as in Dupuytren's contraction of the fingers. In the arm we also find the atrophic rigidity. The upper arm is freely movable. There has never been any pain. The child has really never been sick; no spasm or paralysis was ever noticed. The disease reminds one at first of a progressive facial atrophy, in which a progressive atrophy of all parts is present: skin, muscles, tendons, and bones. We must not, however, overlook scleroderma in changes of the skin. In the literature of foreign countries a few similar cases have been described.

STUTTERING OF SPEECH.

ALB. LIEBMANN (*Der Kinderarzt, 1897, lxxxix, 98*) says: *Stuttering* is a spastic co-ordination neurosis (Kussmaul). It consists in the interruption of speech, usually at the beginning of a word, by inco-ordinated spasmodic movements of the organs of respiration, speech, or articulation. A few other psychical phenomena occasionally, but not always, accompany these external symptoms as for example, a bashful, anxious manner, low spirits, and particularly a fear of being unable to pronounce certain sounds.

According to Liebmann the disturbance of respiration as well as the psychic symptoms are secondary. The disturbance of respiration is due partly to the psychical excitement of the patient, and partly to the abnormal antagonism which the spasmodically contracted organs of articulation and of speech oppose to breathing. Liebmann comes to this conclusion from the fact that the respiratory disturbance disappears as soon as we are able to quiet the patient, and to bring articulation and vocalization into good order; the latter is attained by Liebmann through speaking with long-drawn vowels.

According to Liebmann's theory the primary element of the stuttering-habit is caused by *abusing the duration of the consonant element* of speech, to which also belong the two so-called vocal attacks: (1) The strong explosive sound of the vocal chords, the spiritus lenis of the Greeks, for example in "alle," "und," "eben," and (2) the respirated vocal attack, the spiritus asper of the Greeks, the friction sound of the vocal chords, for example in "halle," 'hund," "heben." The *consonant* element of speech is produced by opposing a *strong* resistance to the expired air at the points of articulation in the mouth or the larynx, by bringing together certain parts. In pronouncing the *vowels*, on the other hand, air passes through the musical rhima glottidis, with relatively *small* resistance. In normal speech the vowels are pronounced longer than the consonants, that is, the time of the relatively small resistance is greater. In stuttering, however, the consonant element is exaggerated, that is, the resistance, which in the normal manner of forming the consonants is opposed to the respiratory current, lasts too long, being made too strongly or being too frequently repeated. The vocal element, on the other hand, that is, the time devoted to the relatively small resistance, is too short in stuttering. The proof of his assertion is found in the fact that all those forms of speech in which the vowels must be more or less prolonged, for example, singing, whispering distinctly, declaiming, pathetic and pastoral speech, are easiest of expression to the stuttering individual.

The root of the evil is therefore to be found in an abuse of the consonant element of speech. While speech is thereby hindered in a high degree the patient becomes diffident and sad, and has a fear of certain sounds. In what manner these psychic symptoms are usually produced and to what a high degree they may attain even in very young children, the following case furnishes an excellent example. The patient is five years old. The mother, according to her own statement, is "nervous." Disturbances of speech have never before been noticed in the family. The patient himself never suffered with any other disease excepting measles. His stuttering dates back a year. The habit came on gradually without any particular reason. He is growing worse, and that in spite of the mother's therapeutic attempts. The mother would remember the sounds and the words which gave the child difficulty, and repeated them to the boy. Whenever he was not able fluently to repeat these, turbulent scenes resulted. Two weeks ago, before the mother brought the boy to me, she had made a particularly energetic attempt to teach the boy some difficult sounds. As, in spite of all her endeavors, the sounds were repeated worse and worse, the mother, in the presence of the boy, flung herself on the floor crying, and loudly complaining over the child. From that time on the child's ability to speak has been reduced. *He is now nearly dumb.* As a rule he is not able to utter a single word, even at home, in spite of all efforts, but only "chews" instead of speaking. Only rarely is he able to stutter out two or three words. The boy is very unhappy over his defect of speech, and is frequently found crying.

Present state:—The five-year-old boy rouses pity while the mother is tearfully explaining his history. He is well developed and quite intelligent. Skin and mucous membranes are pale. Adipose tissue moderately well developed. Upper air-passages normal. Nose breathing free, organs healthy. No disturbance of motility or sensibility. Reflexes normal. When the patient is asked to speak he chatters with his teeth for a minute, generally without being able to emit the slightest sound. The rows of teeth are nearly closed over each other, the upper incisors overlapping the lower, in nearly the same position as when the jaws are at rest. The lips, furthermore, are at the same time slightly parted, even if the first word should begin with a labial. True movements of articulation are never observed during this chattering of the teeth for a minute at a time. Diagnosis was not difficult in this case, for the reason that when the patient did speak, *stuttering* was typical, but the case is complicated and presents some interesting phenomena.

In the first place, the great psychical aspect of the affection in a five-year-old child is remarkable. In young children this factor is usually much smaller. In this case the psychic condition is undoubtedly an artificial product, caused by the energetic, ill-directed, curative attempts on the part of the mother. This case plainly shows how an individual who stutters should *not* be treated. Severity and every reference to the difficult sounds will increase the affection. The patient is made timid, respiration becomes more irregular, and the movements of the organs of speech more inco-ordinate. By calling attention to the difficulty of a sound the patient is induced to exert an altogether abnormal force, and thus will stutter the more. By kindness and by distracting the attention from the difficult sounds we will easily attain fluent speech in children. The patient's muteness is quite remarkable. It did not show itself only at the first consultation, but had existed for two weeks. A muteness of this kind is usually only met with in aphthongia and related spasmodic neurosis. In aphthongia a spasm of the hypoglossal region usually occurs with every attempt at speech, which prevents all sound. These cases are very rare. Kussmaul (Stoerungen der Sprache) has described three cases from literature. Liebmann himself has described two such cases, observed with Gutzmann. In this patient, however, speech is prevented neither by spasm producing movements of deglutition, nor by spasmodic contractions at the site of articulation. His inability to speak may rather be referred to the fact that he does not make a true attempt to speak, but always chatters with his teeth in place of taking the right position for making the first sound.

This dumbness was purely *physical* in our patient. The boy has been brought by the irrational remedial measures taken by the mother, to a condition in which he does not make any articulating movements, but only chatters with the teeth.

In short, stuttering is complicated in this patient with an *abulia* of the speech.

The treatment of this case presented greater difficulties than usual. Liebmann explained to him that the only reason why he could not speak was because he did not make the proper movements with his mouth and tongue. He promised him that he would be able to talk more fluently if he would only repeat carefully what was said to him. For the rest, treatment was adopted as laid down in Liebmann's article, "*Eine Neue Therapie des Stotterns*" (*Deutsch. Med. Ztg., 1896*)—A New Therapy of Stuttering. In opposition to other authors, Liebmann holds, that in the treatment of stuttering, practice in breathing, voice and articulation is superfluous, indeed, hurtful at times. The movements necessary to speech can be made by a stuttering individual. As regards some sounds, the patient, to quote Dehnhardt, possesses the "idea" that he cannot produce them, and is upheld in this idea by the physician who insists on teaching him these sounds. The mistake of a stuttering person lies in the fact only that he allows the consonant element of speech to predominate. Therefore, treatment should only be directed to shorten the consonant element in the speech of the patient, and give to the vocal element the proper precedence. To gain this end, psychic influence and mechanical help are necessary. Liebmann obtains both by encouraging the patient at his first visit to pronounce his sentences with pure long-drawn vowels. Every stuttering individual will already be able to speak a series of sentences fluently in the first attempt. The psychic influence of this is very great. Very soon we will be able to drop the excessive prolongation of the vowels. As a general rule, the patient will speak normally in a few days. The advantages of this method are:

(1). The speech of the patient will not be affected with the "low" (Gutzmann) or "uncertain" (Treitel and others) vocal effort, which may readily be permanently added and which draws the attention of spectators in an uncomfortable manner.

(2). The cure is greatly hastened; instead of a treatment lasting three to four months, one of four weeks only is necessary.

(3). Young children, as for example this five-year-old boy, cannot be made to carry out the exercises described by authors, and allow themselves, as Gutzmann has it, to be drilled in the movements necessary to speech in a "conscious physiologic" manner.

Under this treatment the patient, discussed here, was able to talk easily after four weeks.

FROG-SKIN GRAFTING IN EXTENSIVE BURNS.

Dr. G. S. SMITH reports in the *Cleveland Med. Jour.*, January, 1898, three cases in which he used frog-skin grafts with most pleasing results, after extensive burns. Of the technic, he says a small or medium sized frog should be chosen, killed by section of the spinal cord at the articulation of the head with the body; the animal is then washed in water, bichloride and sterilized water, and the skin of the belly, back and legs used for grafts, which should be about a quarter of an inch square. The grafts are to be lightly pressed on the granulating surface and a dressing of vaselin and boric acid ʒ i to the ounce used. The dressings must be changed every two days and the parts thoroughly irrigated with carbolic solution (1:100), followed by sterilized water. In about a week the grafts disintegrate, leaving behind a thin transparent film of embryonic epithelium. The new skin is perfectly elastic, but is, of course, devoid of sweat and sebaceous glands and hair follicles, and is less sensitive than human skin. It is worthy of a trial in cases where it is imprudent for the patient to provide the necessary skin grafts, and where it is not possible to obtain human grafts from other persons.

EXTROPHY OF THE BLADDER.

Dr. G. R. FOWLER presented before the Brooklyn Surgical Society a case of extrophy of the bladder in which implantation of the ureters into the rectum had been successfully performed. After thorough cleansing of the rectum the abdomen was opened in the median line, the patient (aged six years) being in the Trendelenburg position. The ureters were freely exposed by incision of the posterior layer of the peritoneum, and were traced to their termination in the bladder, from which they were detached, the ends being cut obliquely. Then a longitudinal incision 7 cm. long was made through the serous and muscular coats of the anterior wall of the rectum. The edges of this incision were retracted, exposing a diamond-shaped space in the submucous space. A tongue-shaped flap of mucous membrane, its base directed upward, was cut from the mucous membrane of the bowel in the lower half of the diamond-shaped space. The flap was then doubled upon itself so that one-half of its mucous surface presented anteriorly, where it was sutured; thus a flap, both sides of which were covered with mucous membrane, was secured. The obliquely-cut ends of the ureters were then placed upon and sutured to the presenting mucous membrane surface of the flap. The valve-flap, with the ends of the ureter, was then pushed into the rectum, and the rectal and abdominal wounds were closed. Prompt recovery followed. The rectum became remarkably tolerant of the presence of urine from the first day, urination occurring per rectum on an average of every three hours. Fourteen months after the operation the child showed no evidence of renal disturbance. Defecation takes place at normal intervals, the movement is formed and not followed nor mixed with urine. Urination also takes place at normal intervals. Regurgitation of urine and admission of feces into the ureters is prevented by the valve with mucous membrane applied to the open mouths of the ureters, and by the pressure of the circular muscular fibers of the bowel wall (*Brook. Med. Jour.*, February, 1898).

DIPHTHERITIC PARALYSIS.

O. KATZ (*Therap. Wochenschr., 1897, iv, 391*) in an address before the Berliner Medic. Gesellschaft, comes to the following conclusions as a result of his studies of diphtheritic paralysis: There are to be found in diphtheritic paralysis, well-marked changes in the nervous system; these are (1) in the ganglion cells and (2) in the trophic nerve fibers coming from them. The ganglion cells are affected in two different ways: first, fatty granules make their appearance in the cell; the affected cell shows disease of its dependent fiber, as it is indicated by chemical changes. The changes in the fiber would seem according to Katz to be primarily a trophic disturbance, leaving the question open, whether the axiscylinder might not itself occasionally be diseased. To him a purely anatomical restoration seems not only possible but very likely, namely a gradual restitution of the cell after the disappearance of the fatty particles and restoration of the protoplasm, as is known to occur in the cells of the kidneys and heart. In this manner the surprising cures of severe diphtheritic paralysis may be explained. A cure is impossible only where necrosis of the cell has taken place. The greater number of symptoms in the convalescence from diphtheria, debility, exhaustion, anorexia, tremor, disinclination for any exertion, weak voice, are to be ascribed to these conditions in the nervous system; a perfect recovery takes place only after the nerve-cell and its prolongations have regained their normal state; this is a matter of time. We are not now dealing with peculiar typical symptoms of the diphtheritic paralysis, but everything may be explained by the condition of the central disturbances. According to Katz there is no typical course. The paralysis of the soft palate, of the eye, etc., do not occur in a certain order. Thus Baginsky has demonstrated the absence of the papillary reflex previous to the occurrence of other symptoms, as paralysis of the soft palate, etc., in eight out of thirty cases. The first symptoms of a diphtheritic paralysis may be shown in an extraordinary affection of the muscular movements, which is usually seen in the difficult deglutition; swallowing becomes an extreme action. In the different functions a great rôle is played by the sensory as well as by the motor nerves, and in central disturbance of the sensory nerves the effect is worse than in that of simple motor nerves, which supply the biceps, for example. That the disturbances are not primarily due to the effect of light is to be explained by the fact that one factor of the reflex, the optic tract, was found absolutely intact in the three cases observed by Katz. A paresis of the other nerves is not sufficient to cause the symptoms under consideration. The medulla oblongata is very much in the background. Katz is of the opinion that the permanent action which takes place in the vagus centers is the cause of an increased supply of blood to the latter, compared with that going to the other centers, and hence of an increased amount of toxines which circulate in the blood. As regards the virus, which acts on the ganglion cells of the spinal cord and the medulla, the idea that it is the diphtheria toxine does not seem extraordinary.

Baginsky remarked that the cases of paralysis ending in death in the greater number of cases affected those children who were injected with the serum somewhat late. Latterly some confusion seems to have arisen in the description of cases with diphtheritic paralysis, by confounding certain cases of paralysis which do not proceed directly from the nervous system with those that do. It is especially necessary to distinguish between paralysis of a hemiplegic nature and diphtheritic paralysis. In one of Katz's cases there existed an obstinate constipation, peristalsis being nearly absent. Here the vagus plays a certain part, because its function is to supply the motor impulse to the intestine. Baginsky also called attention to the fact that a marked degeneration of the diaphragm was noticed in the specimens exhibited by Katz. The existence of a special paralysis of the diaphragm after diphtheria has frequently been doubted.

Israel, Jr., wished to make some observations relating to histology. He had repeated Hauser's experiments, who had seen in organs aseptically preserved the appearance after death of fatty metamorphosis. From his own researches, Israel is convinced that Hauser's view is based on a positive error. Hauser used old specimens and did not employ acetic acid nor caustic potash, which I used on fresh specimens, with the result that the fatty granules disappeared.

Hirshberg offered a few remarks bearing on the frequently occurring ocular paresis following diphtheria. He was dealing here with a paralysis of accommodation, which never appeared unilateral but always involved both eyes equally. Paresis of the pupil was never present. The optic nerve was never involved, and recovery always took place, with the exception perhaps of grave complications.

Remak observed that diphtheritic paralysis was sometimes regarded as a peripheral affection, sometimes as central. Interesting as Katz's studies may be, they had not contributed anything in solving this question, for the three cases reported were not really cases of diphtheritic paralysis in a purely clinical sense, they were extraordinarily severe cases. As a rule the cases took a milder course; the children usually attended school again after an attack of diphtheria; after eight to fourteen days they would present a paralysis of the soft palate, etc., and were then consigned to the neuro-pathologist. Remak had in this way seen numerous cases, which usually recovered. Ataxy may occur, not however necessarily. We have to deal with the question, What is the cause of paralysis in the usual cases? and not, What is it in the grave cases where paralysis of the heart, etc., come on?

In the simple cases, according to Leyden's hypothesis, there is simply a peripheral neuritis, while others assume a central disturbance. As these cases as a rule recover, they must be caught, so to speak, as occasion offers, when dead from some other disease. In this way alone will it be possible to advance the true pathogenesis of diphtheritic paralysis. Paralysis usually begins with that of the soft palate, followed by other reactions of degeneration and sensory disturbances. The impression of direct continuity is given. In all probability the truth lies between the two, a toxin affecting at the same time both, or the peripheral nerves first, and then the corresponding portions of the central nervous system. It is probably not true that the disturbance is only nuclear, or only peripheral. Remak is usually not an advocate of the peripheral pathogenesis; for example, in lead paralysis, he is of the opinion that the former is of central origin. For this reason he was non-partisan in this matter. The clinical picture pointed to the fact that the point of origin was peripheral. Diphtheritic paralysis did not generally correspond with the picture of a neuritis with disease of the motor ganglion cells; very rarely did great atrophy of the extremities take place, usually only an ataxy; the knee jerk was absent, and nutrition remained good. The reaction of degeneration found by Ziemsen only very rarely occurred. Remak also holds to the opinion that a typical course can readily be observed in the symptoms of paralysis.

PRACTICAL NOTES.

For Pediculi Capitis.—

℞	Hydrarg. chlor. mit.	gr. xii
	Ac. acetici glacialis	ʒ i
	Aq.	℥ vi

M S.—Use as a lotion twice a day, after washing the head with green soap.—*Ex.*

For Laryngismus Stridulous.—

℞	Potas. citrat	ʒ ii
	Syr. ipecac	℥ ss
	Tr. opii	gpp. xv
	Syr. simpl	℥ ss
	Aq.	℥ iv

M S.—For older children, teaspoonful every two hours.—*New Eng. Med. Monthly, Jan., 1898.*

Acute Catarrhal Bronchitis.—

℞	Potass. citrate	℥ ss
	Apomorph. hydrochlor	gr. i
	Syr. ipecacuanhæ	℥ ss
	Succi. limonis	℥ ii
	Syr. simplicis q. s. ad	℥ iv

M S.—℥ ss in water every three hours.—*Wood.*

A Simple Method of Estimating Doses for Children.—N. C. Pedersen has come forward with a new method of estimating doses for children, for which he claims (1) entire fitness and safety of the tentative dose of any drug for any age under most circumstances, (2) accuracy and convenience of mathematical application, (3) constancy of dose increase from year to year. He compares it with the methods of Young, Cowling and Bromton. The method is on the basis of one twentieth of the adult dose for each year, and is founded on the assumption that at twenty years, the patient would take the full adult dose. His formula is, X (the dose) = $\frac{D}{20}$ x A, D being the full adult dose, and A the age of the patient. The method is equally applicable to the apothecaries' and the metric system, and is extremely simple in application.—*N. Y. Med. Jour., Jan. 22, 1898.*

Hydrocyanic Acid as an Antidote for Chloroform.—It is stated in the *Lancet* for January 1, in a paper by Hobday, that hydrocyanic acid in full medicinal doses, administered as soon as respiration ceases, gives very satisfactory results as an antidote to chloroform. It should be dropped on the back of the tongue by means of a graduated dropper. Artificial respiration is to be practised at the same time, and when breathing has begun again, ammonia vapor is applied to the nostrils. —*N. Y. Med. Journal, Jan. 22, 1898.*

For Pulmonary Congestion in Infants.—

℞	Ammonium acetate	15-30 gr.
	Sodium benzoate	30 “
	Oxymel of squill	150 “
	Syr. of cherries	450 “
	Distilled water	1650 “

M S.—Teaspoonful or dessertspoonful every hour. —*Indép. Méd., Dec. 29, '97.*

Insomnia Infantum.—

℞	Fld. extr. hyoscyami	gtt xii
	Syr. simpl.	20.0
	Aq. font. q. s. ad.	120.0

M D.S.—A teaspoonful every four hours.—*Wollenmann.*

Malaria—

℞	Tinct. eucalypt. glob.	
	Spt. vini dilut. āā	8.0
	Chinin mur.	2.0
	Acid mur. dil. q. s. ad. solut.	

M D.S.—20-40 drops five times daily in water.—*Revue de Thérap.*

Ozena.

℞	Natr. β naphthol (Microcedin)	0.1
	Cocain mur.	0.15
	Vaselin	30.0

M Ft. ungt. D.S.—Externally.—*Merk's Jahresber., 1896.*

Pulmonary Edema in Affections of the Respiratory Organs.—

℞ Tinct. strophant.

D.S.—One to two drops every three hours.—*MacGregor.*

Pertussis.—

℞	Coccion. subtil. pulv.	0.05-0.2
	Ammon. carbon	1.0-2.0
	Syr. aurant	20.0
	Aq. destill. q. s. ad.	100.0

M D.S.—Shake! A teaspoonful every two hours. —*Naegeli.*

Bites of Insects.—

℞	Ichthyol	1.0
	Aq. destill	5.0

D. S.—To be painted on.—*Revue de Thérap.* —*Der Kinderarzt, 1897, lxxxix, 119.*

Scarlet Fever a Local Disease.—Dr. Luke Flemming holds that scarlet fever is a local disease of the throat; that the nephritis and dermatitis are the results of attempt at excretion of the toxin; and that the desquamative stage is not the dangerous period, but that infection results from the mucous membranes of the throat.—*Med. Record, Jan. 15, 1898.*

The use of cistern instead of well water is recommended as a means of preventing typhoid fever in rural districts.—*N. Y. Med. Record, Jan. 15, 1898.*

Contribution to Serum Therapy in Diphtheria.—Dr. Chas. P. B. Clubb, in the *Brit. Med. Journal*, Oct. 23, 1897, reaches the following conclusions from a comparison of 300 cases of diphtheria treated by antitoxin and 300 cases not so treated:

1. Death rate was 32 per cent. lower in those treated with antitoxin.
2. Necessity for tracheotomy was lessened in 23 per cent.
3. Death rate in tracheotomy cases was decreased by 30 per cent.

An erythematous rash appeared in 100 cases, varying in form, position and severity. The author concludes that a reliable antitoxin should be used early and in sufficient quantity.—*Medicine, Jan., 1898.*

Antistreptococcus Serum.—Van de Velde found that a given serum would protect only against the particular variety of streptococcus from the culture of which it was immunized. He succeeded in obtaining a serum that would protect against two varieties by immunizing a horse against the two germs. He hopes, by extending this method, to obtain a general protective antistreptococcus serum.—*Arch. de Med. Expct. d'Anat. Path.*

Cases of Follicular Tonsillitis due to Milk Infection.—In the *Brit. Med. Journal* for August 7, 1897, Grey-Edwards and Severn report an outbreak of this disease which occurred in the former's practice. As all the cases received milk from one farm, a specimen was sent to Severn for a bacteriological report, of which the following is a summary:

(1). Staphylococcus pyogenes aureus present.
(2). Staphylococcus pyogenes albus present.
(3). Streptococcus pyogenes (short form) present.
(4). Bacillus diphtheriæ (Klebs-Lœffler) absent.
(5). Bacillus tuberculosis absent.

A sweeping from the throat of one patient was also sent, with identically the same result. A veterinary surgeon failed to detect anything wrong with the cows, and it was not until the milk from every cow had been examined that the offending animal was discovered.

The clinical features of the cases were general pains about various parts of the body, headache, "chilly feelings," etc. The throats felt a little sore. On inspection the tonsils were enlarged, red, and spotted with the soft creamy membranous patches typical of follicular tonsillitis. The temperatures ranged from 100° to 104° F., and in each case about three days elapsed before becoming normal.

Extreme prostration and languor were present in one case.

A New Method of Laryngoscopic Examination in Infants.—At a meeting of the Laryngological Society of London, held in February, 1897, Dr. LAMBERT LACH demonstrated the following method: The infant being held in the usual position for laryngoscopy, the index finger of the left hand is passed into the mouth over the base of the tongue and the terminal phalanx hooked round the hyoid bone, which is by this means pressed well forward. The rest of the finger holds down the tongue out of the way, and, with the left thumb pressed up under the chin serves to steady the infant's head. A small laryngeal mirror is now introduced in the usual way and the larynx comes readily into view. When the child is a little older and possesses teeth, a copper spatula suitably bent, with a small sharp curve at the end, is used instead of the finger; the instrument being also useful when the examiner's finger takes up too much room in the infant's mouth. As a rule the mouth is kept wide open during the examination, but a gag may be necessary.

Hematemesis in an Infant.—Dr. M. D. HAGE, Jr., reported before the Richmond Academy of Medicine and Surgery a case of vomiting of blood by an infant one day old. There was no apparent cause; but, acting on the theory of engorgement of the liver with congestion of the portal system, calomel was administered, and the child progressed favorably.—*North Carolina Med. Jour., Jan. 20, 1898.*

Conjunctivitis and Ametropia.—In children the only evidence of ametropia may be often recurring attacks of conjunctivitis or blepharitis marginalis.—*Char. Med. Jour., Jan., 1898.*

Microscopic Examination of Milk to determine the presence of pus corpuscles is to be recommended in cases of epidemics of milk poisoning, as inflammation of the udder has been found to be a not infrequent condition among many herds. Milk containing more than five pus corpuscles to the field of an oil immersion lens, in a centrifugalized sediment, should be rejected as unfit for use. By examination of the milk from each cow the diseased animal can be readily discovered and excluded from the herd.—*Med. News.*

Intestinal Catarrh of obstinate subacute variety, where simple astringent and digestive agents fail, will often yield to a combination of remedies. Dr. A. L. Hall finds the following satisfactory:

℞	Tr. ferri chloridi	dr. ii
	Tr. catechu	dr. iii
	Tr. opii camphoratæ	dr. iv
	Ext. rhei aromatic fl	dr. ii
	Sps. zini gallici	oz. ii
	Syrupi simplicis q. s. ad	oz. viii

M. Sig.—For a child one to two years old, ½ to 1 teaspoonful every 4 to 6 hours.—*Buff. Med. Jour., Feb., 1898.*

Diphtheria cases treated with antitoxin in the Cook County Hospital, Chicago, from July, 1895, to February, 1897. Antitoxin was used in conjunction with local treatment. The medicaments most used were tincture chloride iron, hydrogen peroxide alone, and mixed with equal quantity of boric acid solution and a one per cent. solution of bichloride of mercury. 146 cases were treated with antitoxin, with 26 deaths. Of the deaths, 9 cases were moribund, or died within 24 hours after admission. In 12 of the 13 cases in which a rash appeared, it was urticarial and persisted three to five days; one case was scarlatinal and persisted two days. The membrane disappeared in four to five days, rarely persisted longer than one week.—*Medicine, Jan., 1898.*

Typhoid Fever Infection in Hospital.—M. Louis Guisiou reports three cases of children who contracted typhoid fever in the *Hôpital des Enfants-Malades* during treatment for other diseases. There was at the time a severe case of typhoid fever in the room where the three children were. The water was not infected; the children were kept in bed, and as they had been in the hospital for some weeks before the appearance of the typhoid fever, there was little probability of it having been contracted before admission.—*Le Progrès Médical, Dec. 25, 1897.*

Microbic Intoxication in the Production of Muscular Atrophy.—M.M. Claude and Charrin, by experimentation with the toxin of pyocyanic germs, found that in about four months there was muscular atrophy of an advanced degree corresponding to faci of hemorrhage in the cord. There is, therefore, a subacute poliomyelitis, comparable to that observed clinically in certain infections.—*Le Progrès Médical, Dec. 25, 1897.*

The Condition of the Pyramidal Columns in Four Cases of Spasmodic Contracture (Syndrome of Little).—M.M. Phillipe and Cestau report four cases of spasmodic contracture in children from four to fifteen years, with general contractures of the extremities. The microscopical examination of the cord and bulb showed the pyramidal columns to be normal.—*Le Progrès Médical, Dec. 25, 1897.*

To Cure Itch in Two Hours.—

℞	Sulphur	℥ iii
	Quick lime	ʒ vi
	Water	O ii

M.—Boil together till combined; allow to cool and settle. Decant and preserve in hermetically sealed bottles. Application: Rub patient all over with soft soap for half hour, then place in tepid water bath for another half hour. Next rub over with the solution and allow it to dry on the skin for a quarter of an hour. Complete by washing in the bath.—*Canada Lancet, Jan., 1898.*

Antistreptococcus Serum.—ROSA ENGELMAN reports six cases of diphtheria treated with retained intubation tubes and antistreptococcus serum. Four cases recovered; "the serum was tentatively used, but because of the small dosage and the mixed character of the infection (diphtheria bacillus, streptococcus and staphylococcus) no conclusions can be adduced."—*Med. News, Jan. 1, 1898.*

The Buzzard in Medicine.—DR. EUGENE STREET suggests that as the buzzard seems to be immune to disease ptomaines and toxines, possibly a valuable antitoxic principle may be obtained from its blood. (*N. Y. Med. News, Jan., 1898.*) It seems to us that it would be necessary to determine first whether the digestive organs of the buzzard may not neutralize or render inert all poisonous substances, in which case it is possible that a new general germicide may be obtained. The buzzard should certainly be studied as to his therapeütic value.

Dr. PIERRE MARIE (*Lancet, Dec. 4, 1897*) reports a case in which intestinal worms caused symptoms resembling those of typhoid fever. There were abdominal tenderness, gurgling in the iliocecal region, and slight swelling of the spleen. Temperature up to 102.2°. On the fifth day after admission a round worm was passed, followed by others on succeeding days. Santonica was administered daily in doses of from one to two grams, continued for some time. Worms were passed as late as the end of the second month. The explanation offered is that the vermifuge only affects the mature parasites, and that the ova remain in the intestine.—*Medicine, Jan., 1898.*

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ORIGINAL ARTICLES.

CAN TARDY HEREDITARY SYPHILIS OF THE BONE BE SUCCESSFULLY TREATED BY THE INOCULATION OF MEASLES?

By H. N. Potter, M. D.,
Burlington, Vt.

Of all the diseases that afflict the human family there is not one that is more terrible in its ravages than syphilis. Notwithstanding this fact, this disease is a common one in certain forms, but it is somewhat uncommon in the tardy hereditary form.

In the past there has been little success in the treatment of this form of the disease; the cases were benefited for a time, but no radical cure followed.

Knowing that such cases are very interesting, I wish to call attention to a case which, while it does not differ materially from such cases in general as regards condition, does so as far as the successful termination of the disease is concerned, and the fact of its originating from the great-grandfather and passing to the fourth generation before being manifested.

Cases of this disease are always interesting because they are somewhat rare, and-their true nature is likely to be unrecognized.

The case is as follows: While in northern New York, about four and one-half years ago, I was called several miles in the country to see a case. I found the case as follows: A female, eight years of age, was greatly emaciated, very weak, and the right limb was enlarged to about twice the natural size; the right foot was deformed and terribly swollen, with two abscesses, which were discharging. Near the articulation, at the hip (right side), were also two discharging abscesses. The child had been sick about nine months when I first saw it. It had been well and healthy up to that time. One evening, after roaming around the farm, the child complained of pain in the right side, near the articulation at the hip. The following day the pain became so severe that a physician was called in, who pronounced it a case of inflammatory rheumatism. The pain grew more severe, and morphia was prescribed. The temperature was extremely high and there was great prostration. The opiate was given for about three weeks on account of the severe pain. In a few days the attending physician found two abscesses forming on the right side, within a few inches of the hip articulation. A treatment was given to scatter the abscesses, as the physician called it, or to prevent their formation. They, however, broke down with copious discharges. At the end of the third week the child was able to sit up, but could not stand alone; the abscesses continued to discharge freely. The leg had enlarged to almost twice the natural size, and was very hard to the touch. The right foot now began to enlarge; two nodes formed on the upper surface and soon were discharging. Another physician was called in consultation, and the case pronounced one of inflammatory rheumatism, with the formation of abscesses—not, of course, due to the rheumatic trouble. The child remained in about the same condition for nine months, with the exception that there was very little pain, and the food was taken badly; there was also great prostration and weakness.

The father is healthy and never has had any venereal diseases. The mother is perfectly well and healthy, with the exception of deafness, which came from local trouble in the pharynx. The family consists of five children, all well and healthy with this one exception. Neither the father, mother or children have ever had any skin eruptions or primary sores. The mother has had no miscarriages. None of the children have ever had snuffles, sore eyes, notched teeth, or enlarged glands. The grandparents of the child give no history of syphilitic taint; neither do the great-grandparents, with the exception of the mother's grandfather, who I found had died after a long sickness from sores on the extremities. The statements made to me by the parents and grandparents living, I have no reason to believe to be false, as they are upright, honest and intelligent; the disease, then, undoubtedly came from the great-grandfather, that being the only history of a primary sore.

I put the child on iodide of iron with the compound syrup of hypophosphites, and other remedies as the several symptoms would direct, with attention to the diet. I have changed, in the four years and a half that she has been under my care, to preparations of mercury, iodide of potassium, and other forms of iodine. Of course, disinfectants have been used on the sores. Not long after I saw the case a third discharge took place on the right leg, near the other abscesses. After several months of treatment the foot ceased to discharge, and eventually became entirely well. Small particles of bone came from the foot at times, and also from the abscesses.

Since I have had the case there have been several nodes formed on the legs and arms, and two on the right cheek. They come very quickly, within a few weeks become very large and hard, and break down and discharge. Particles of bone come from the nodes, and finally the wound heals. Of course, the glands have been somewhat enlarged. About once in two or three months the child complains of sickness at the stomach, with vomiting, but it is soon relieved by simple remedies. In the four years' treatment up to July, 1897, the case had progressed favorably, but with hopes of only a partial recovery. There were at that time two abscesses, one on the right leg near the hip articulation, the other on the right breast. The appetite was not very good; the child slept fairly well, but there was considerable pain at times. The right leg was more normal; the child could stand alone, but could not walk.

In the month of July the child contracted measles. The case was a severe one, and the child was greatly prostrated and really in a dangerous condition for some time.

I had not seen the case from March, 1896, until September, 1897, although the child was under my care and in charge of a resident physician who counseled with me. After recovering from measles the child commenced to improve almost miraculously. When I saw her last September there was a wonderful change; the abscesses were disappearing, with no signs of others forming; the body was in a normal condition, child gaining in flesh, appetite good, no stomach trouble, child able to walk a little, and every sign of a complete recovery.

Up to the present time the improvement continues the same, with no symptoms of a return of any of the abnormal conditions; the child is apparently on the road to a complete recovery.

As there was nothing in the treatment to bring about such a rapid change, the thought has occurred to me that the inoculation of measles has produced the result.

Would there be anything strange in such a supposition? With the tests made of the bacilli of erysipelas for the successful treatment of sarcomatous growths, why would it be impossible for the bacilli or infection of measles to successfully relieve the conditions of hereditary syphilis, especially a tardy form affecting the bones?

To be sure, there are some obstacles in the way, even if such a treatment would prove curative; one being the contracting of measles prior to a manifestation of syphilis. Another would be the difficulty in infecting a person suffering from syphilis, with measles, on account of the large percentage of young people who have already contracted the latter disease.

Notwithstanding these difficulties, I consider the experiment worthy of a trial, and would suggest that the managers of institutions for children, and physicians in general, give this new theory a trial.

This case is very interesting from the fact of its being tardy, making its appearance in a child eight years of age, and coming undoubtedly from the great-grandfather; and because of the sudden improvement and recovery from a disease which may be classed as incurable.

71 Winooski Avenue

THE DIAGNOSTIC VALUE OF TUBERCULIN.

By DILLON BROWN, M.D.,
New York.

THERE is no class of cases in which an early diagnosis is so important and so difficult as the tuberculous ones. In childhood, the early stages of tuberculous meningitis and of typhoid fever resemble each other very closely, and, in these cases, the most experienced and painstaking diagnostician will often make mistakes. Unfortunately, Widal's reaction fails to help us as much as was hoped, for it has been found that tuberculosis is almost the only disease, besides typhoid fever, which gives this characteristic reaction, of clumping and immobility, when the blood serum of the patient is added to a virulent growth of typhoid bacilli. Again, the diagnosis of tuberculosis of the joints, of the intestines, of the lymph nodes, of bone, etc., is very difficult in the early stages of the disease, and a favorable prognosis depends upon its early recognition.

Therefore, we should utilize every means at our command to help us, and, whatever may be the ultimate decision as to the therapeutic value of tuberculin, there can be no doubt of its great diagnostic value. I am firmly convinced that it gives us more constant and accurate results than any other test, although we should not neglect to obtain as much additional evidence as possible. In all cases the character of the temperature is important, and in tubercular meningitis an ophthalmoscopic examination may clear up the diagnosis at once. If Ferrand's experiments are confirmed, we will undoubtedly have even a better means of diagnosis, but until then tuberculin must be our main dependence.

The manufacture of tuberculin is not costly and, if done carefully, its use is absolutely without danger. To obtain considerable quantities of the crude product, the tubercle bacillus is cultivated in a medium of beef tea containing two per cent. peptone, one-half per cent. chloride of sodium, and five per cent glycerine. This must be made slightly alkaline, and as the tubercle bacillus is a facultative anerobic bacillus, it grows better on the surface of the culture medium. To obtain this effect, thin slices of cork covered with silk threads two to three inches long, are floated on the surface; and, after thorough sterilization and incubation to test its sterility, the top of the corks, and finally the silk threads, are inoculated with a *pure* culture of tubercle bacilli. After twenty-five to thirty days' development in the incubator at 37° C., an abundant growth of tubercle bacilli is obtained. It appears as a thick and dry white layer, which covers the entire surface of the cork, and finally sinks to the bottom, breaking up into fragments. These cultures, after their purity has been tested by careful microscopical examination, are separated over a water bath to one tenth the original volume, and then filtered through a Pasteur filter. The filtrate thus obtained is tuberculin, and it contains—having been evaporated to one-tenth of its original volume—fifty per cent. glycerine, which prevents the development of bacteria. It keeps well and preserves its activity.

The dose for diagnostic purposes is still undetetmined. In young children I usually give one (1) milligramme, and in adults from five (5) to ten (10) milligrammes. It is wise to dilute the tuberculin with a sterile half per cent. solution of salt in water, so that the dose can be more accurately measured, and I advise that, therefore, as the remedy should be very cheap, and as the quantity of tuberculin in each bottle is marked on the label, the entire bottle be diluted with enough sterile half per cent. salt and water to make the dose equal to twenty to thirty drops. For example, if the bottle contains ten milligrammes and you desire to give a dose of one milligramme, add, under proper aseptic precautions, enough of half per cent. sterile salt solution to make three and one-third drachms, and give of this one-tenth of the whole quantity, or twenty minims. Of course, it will be simpler if you use the metric system in making your calculations, and, if you please, you can make one c. c. as your dose. Then you would add enough sterile salt solution to make ten c. c., and give as a dose one c. c. of the diluted tuberculin. It would be safer if even a greater dilution was made.

The skin should be thoroughly prepared, as in giving antitoxin; the hypodermic syringe should be sterile and every precaution should be taken to prevent infection from outside sources. Always make your dilutions fresh; in other words, after you have given one or more doses of the diluted tuberculin for diagnostic purposes, throw away the unused balance. It is better to give one large dose. Preliminary injections of small doses of tuberbulin are to be avoided, as there is a strong tendency to produce tolerance to its action, and the characteristic general reaction will be lost or so greatly diminished that it may leave you in doubt.

The characteristic reaction is a rise of temperature and of pulse rate. The local reaction is not of so much diagnostic importance. The absence of reaction is almost positive proof of the absence of tuberculosis. The presence of the reaction in four cases out of five shows the presence of tuberculosis.

The tuberculin method is so simply and easily applied, it is so free from danger and gives such valuable information in a class of cases in which such knowledge is so valuable and of such practical importance, that it is surprising that its use has not become more general. It is especially valuable in the diagnosis of early pulmonary tuberculosis, and of tuberculosis of the glands, the bones, the joints, the peritoneum and the pleura—a class of cases in which the bacilli cannot be readily found.

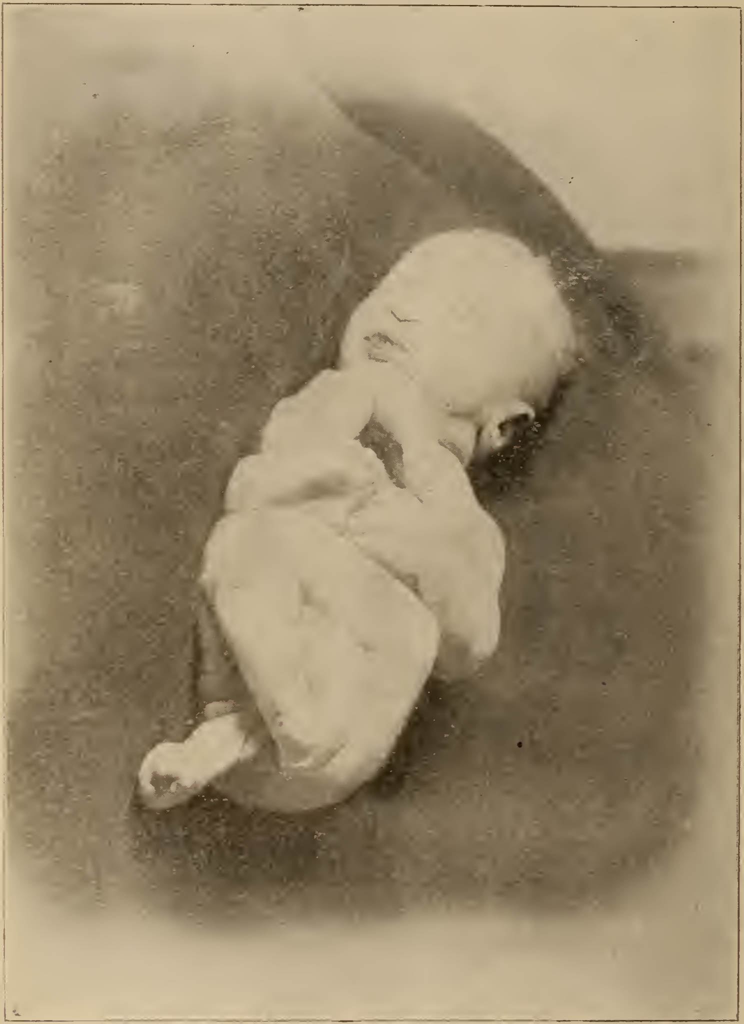
To summarize: Success in the treatment of tuberculosis depends upon an early diagnosis, and there is no disease in which the difficulties in the way of an early diagnosis are greater.

Tuberculin makes this comparatively easy; it is simple to use, and it is safe for the patient. If the reaction is absent you know almost positively that tuberculosis is absent. If the reaction is present you know that in four cases out of five tuberculosis is present.

UNUSUAL MALFORMATIONS IN A CHILD.

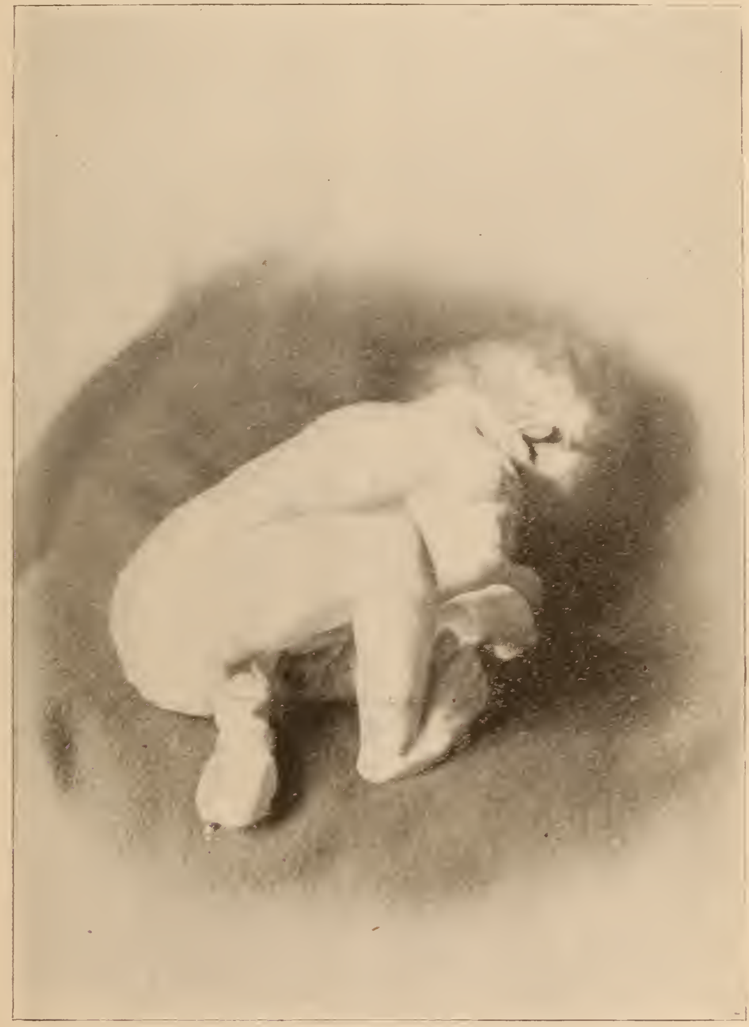
By J. Odenbaugh, M.D.,
Mt. Blanchard, O.

THE child was born Thursday, January 13, 1898. The mother was a primipara, aged thirty-seven years. The course of the pregnancy was eight months, the labor was normal, and the presentation was a vertéx one. The weight of the child was five and one-half pounds. The child lived three and one-half hours. The malformations were numerous and interesting, viz.: The right eye was small and the left one large. The left ear was loped, the nose was flat and broad and had no septum. The mouth was large and crooked. There was a double joint at the left elbow, and a heavy growth of hair on the head and the right hip. There was no fold of the buttocks, no anus and no scrotum. The penis was five and one-half inches long and three and one-half inches in circumference, with a testicle on either side about



the size of a hickory nut, and situated near the body of the child, as shown in the photograph. There was a double joint of the right hip, and also of the left knee. The child had club feet (talipes calcaneus), and the fingers on the left hand were short and claw-like, while on the right hand the fingers were large and well formed.

In this, as perhaps in all such cases, the cause was ascribed to a fright. Upon being informed of the condition of



the child the mother related to me the following circumstance, which caused her great alarm at the time, but which she had promptly dismissed from her mind: On July 4, 1897, while she and her husband were out driving, a stallion escaped from a stable and chased a mare on the road; and just before reaching them overtook and covered the mare. The mare again ran, the stallion after her with his penis swinging from one side to the other, the sight of which the mother claims caused the extra growth of penis on the child. A man ran out, caught the stallion by the nose and right ear, and after a fierce struggle conquered him. To this she ascribes the condition of the child's nose and ear. She would not attempt to account for the other deformities.

The father of the child is a farmer in apparently good health. The mother's health is good, except she has a floating kidney. The father of this child is also the father of five children by his first wife, the youngest of which, a girl aged ten years, has a growth of stiff hair—very much resembling hog bristles—commencing at the left wrist joint and extending up the arm about five inches. The skin over the same area resembles that of a hog. As this man's last child by his first wife and first child by his present wife are both deformed, it would suggest the thought that deformities may result from paternal causes as well as maternal impressions.

PRACTICAL NOTES.

Herpes zoster is treated by OHMANN-DUMESNIL with arsenic. He prefers arsenic in the form of pills to its administration in the liquid form, and prescribes it in the following manner:

℞	Acid arsenicos.................	0.003
	Pulv. pip. nigr..................	0.15
	Extr. gentian q. s. ad. pilul. i.	

S.—One pill after meals thrice daily.

Externally a dressing of cotton batting and a roller bandage is applied after the vesicles have been covered with carbolated camphor powder, or a mixture of bismuth-subnitr. two parts, chalk four parts. Healing began after a few days in all of the six cases which were thus treated by Ohmann-Dumesnil.—(*Die Therapie d. Gegenwart*, *1897*, *xxxviii*, *657*.)

The Treatment of Chilblain.—Prof. C. BINZ (Bonn) finds that most of the medicinal substances recommended in the different text-books do not penetrate to the seat of the inflammation. The application of solutions or ointments consisting of tannic acid, lead salts, zinc salts, alum and similar substances, to the surface of the epidermis, under which the inflammation has its seat, does not give good results, because none of these substances are able to permeate the epidermis. Volatile substances, however, possess the faculty of passing through the normal skin, and of then developing their healing qualities. To these substances belongs chlorine, particularly in the mercantile form of chloride of lime. Binz was aware of this for some time, and last winter again applied it in a number of cases. His formula is as follows:

℞	Calcii. chlorid......................	1.0
	Unguenti paraffini.	9.0

M. Ft. ungt. S.—Use externally as ordered.

A portion about the size of a pea or bean, according to the extent of the chilblain, is to be rubbed softly into the reddened and painful area, for about five minutes just before going to bed, and is then to be covered by a simple bandage, to prevent the rapid evaporation of the chlorine, as well as to guard against soiling the bed-clothes, and over all a stocking or glove is drawn. The inflammation and pain, as a rule, vanish within a week, if the affection has not lasted too long, or has already gone on to suppuration.

The great reddening of the point of the nose, which frequently affects females, especially in winter, and when exposed to a sharp wind in autumn and fall, often remaining permanently, and which is looked upon as an expression of digestive disturbances, uterine disease, &c., is a similar condition. Binz found the chloride of lime ointment satisfactory in a few cases. As an explanation of its action in true chilblain, we may argue as follows: The heat and carbonic acid of the tissues disintegrate the chloride of lime. The chlorine easily escapes through the epidermis, and meets with the leucocytes, which have migrated from the dilated vessels. It checks their motility and probably causes the vessels to contract. In this manner two phenomena of the inflammatory process and causes of threatening suppuration are removed. This mode of action seems to Binz most probable.

It is of the greatest importance that the physician has an eye to the proper constituents of the ointment ordered. The officinal chloride of lime should contain at least 25% of active, easily separable, chlorine. If the chloride of lime has been kept too long at the drug-store, this proportion will have diminished. To obtain good results, the ointment should therefore possess a strong, unmistakable odor of chloride of lime.

For this reason, also, the chloride of lime should be mixed with paraffine ointment only, and lard or lanolin should not be employed. In the local treatment of frost-bite, the general health should also be considered, and especially anemia and the sensation of cold should be combated. The prophylactic treatment of frost-bite consists in a daily foot-bath of cold water, beginning during warm weather and continuing it during the winter.—*Die Therapie d. Gegenwart.*

The Treatment of Coryza in Childhood.—DAUCHER gave the following directions to a ten-year old child with lymphatic habitus and inclination to struma:

1. Every morning, on awakening, the nasal cavities are to be thoroughly washed out with a sponge or napkin wet in a lukewarm solution of common salt.

2. After a few days this irrigation is replaced by one containing a 10-20% solution of alum. If headache is severe, the child is to inhale every two hours the steam from the following mixture:

℞	Chloroformi	5.0
	Æther sulfur.	15.0
	Ol. terebinth	3.0

M. D. S.—For external use.

These inhalations are to act as anodyne and revulsive, but not as a narcotic.—(*Ibid*, *p. 651.*)

The Treatment of Conjunctival Affections by Argentamin.—Dr. Josef Imre (Budapest) has for a number of years been searching for a remedy which would combine the two important qualities of disinfection of the eye and the contraction of its vessels, while exerting a minimum of irritation, and which could be employed with ease in various forms. These two qualities are undoubtedly possessed by nitrate of silver, but in stronger solutions its irritating qualities are too pronounced, and its application is therefore restricted to once or twice a day. This, however, is insufficient for disinfection. Its acid reaction also is to be deprecated. Argentamin (ethylendiamin silver phosphate), on the other hand, differs from the silver nitrate in not forming a precipitate with fluids containing sodium chloride. Experiments in Neisser's clinic have demonstrated that argentamin possesses greater disinfecting powers than nitrate of silver, and at the same time passes more deeply into the tissues.

Most cases are much more irritated by it in the beginning than by a nitrate of silver solution; suppuration, therefore, is increased. For irrigation a solution containing 1:5000 to 1:4000 was used. Imre has used argentamin in place of a 1-2% solution of nitrate of silver for half a year. He was surprised to find that a solution of 1:500, and later one of 1:100, produced absolutely no irritation, not as much even as cold water. He supposed that the solutions were too weak to produce any good results and tried a 5% solution, and soon came to the conclusion that it was unnecessary to dilute the argentamin with water; he observed also that argentamin was decomposed on the surface of the conjunctiva in the same manner that nitrate of silver was; a grayish deposit, however, was never produced, as happens with the latter; in other words, argentamin does not enter into combination with the albumen of the tissues. Argentamin was usually employed in the form of pencilling, and in only a few cases as an irrigation, or as eyedrops. The following is a resumé of Imre's experience:

1. Applications with a brush of a solution, at the normal temperature, caused no hyperemia; the greater number of patients felt absolutely no burning sensation; in some, itching continued for ten minutes, especially in those whose conjunctivæ secreted abundantly.

2. The drug produces discoloration (on linen, fingers, face), as does the usual nitrate of silver solution.

3. Irrigation with water, after pencilling, is unnecessary; it is, however, recommended to wash the first deposit off thoroughly, and repeat the painting a second time; the drug is then not decomposed, and has a more energetic action. Burning or itching is never noticed.

4. The results are at least as good as those obtained with a one to two per cent. solution of silver nitrate. The astringent action is prompt and remarkable.

5. The painting may be repeated four or five times a day without causing too great an irritation.

6. The remedy was employed in conjunctivitis, catarrhalis and blenorrhoica, and in trachoma; it was also well borne in corneal ulcer and iritis.

Imre received the impression that the hypertrophied tissues retrograded more rapidly than after the application of nitrate of silver, and that in recent cases of trachoma the follicles and deep infiltrations which become sclerotic after the use of nitrate of silver rapidly disappeared on the use of argentanim. It is recommended by Imre to all ophthalmologists.

The Statistics of Measles were enriched by interesting reports of Marfan and Bernard in the Medical Society of the Hospitals of Paris, July 23, 1897. These physicians had under their care in the isolation pavilion of the second great children's hospital of Paris 483 cases of measles with 104 deaths (= 21.15). In this relatively high percentage of deaths 77 cases of broncho pneumonia should be noted, while complications were absent in only 11 cases. The number of patients from one to two years of age was especially large, but the children under one year of age furnished the greatest percentage of deaths. It was observed that the red line at the border of the gums was present constantly, that the appearance of diarrhea was not of any prognostic significance, that peripheral swellings of the lymphatic glands were nearly always present, and that they made their appearance at the same time as the skin eruption.

As regards the treatment, both authors deprecate the poor conveniences of the hospitals, which do not permit the separation of cases complicated by broncho pneumonia from the ordinary measle patients; nevertheless, they believe that the systematic application of the hot bath (38°) every three hours has on the one hand reduced the frequency of this complication, and on the other rendered it in a great measure less dangerous. Rendu and others pointed out the difference of the mortality of measles in private and in hospital practice; in the former nearly 0% were encountered, while the latter occasionally shows a mortality of 100%. Bucquoy noticed in family epidemics that the gravity of measles rises with the number of children attacked, and the prognosis must be guarded. Béclère also observed a constant enlargement of the lymphatic glands in measles. — (*Munch. Medic. Wochensch.*, *1897*, *34*.)

EDITORIAL COMMENTS.

Thirty-first Annual Report of the State Board of Charities.

This report has recently been issued and provides some instructive reading. The measure of legislation of 1897 in which the "Board" took the greatest interest was the "Placing-out Bill." It is entitled "An act to regulate the placing out of children, providing that they shall only be placed out in accordance with rules and regulations established by the State Board of Charities, authorizing the said Board to make such rules and regulations; also providing that any violation of the provisions of this act shall be a misdemeanor."

On account of opposition on the part of societies mainly in New York and Brooklyn, the Governor decided to withdraw his approval, and the measure failed to become law. The Board insists that some such law is absolutely essential to remedy the abuses which now exist in the placing-out system, and contends that only a duly qualified and appointed agent acting under authority and supervision can properly discharge the important functions committed to him. In the report several instances are given illustrating the abuses of this placing-out work as now carried on. It would appear from these that the Board have good reason to be dissatisfied with the manner in which the work is now conducted. With the exception of the Foundling Hospital at Randall's Island, the charitable institutions for the young in New York state seem to be in a satisfactory state. As to the infants' hospital at Randall's Island no improvement in the management is reported. The nursing is characterized as altogether inefficient. Surely the time has come when steps should be taken to remedy this scandalous state of affairs. At any rate, the visiting committee's suggestion, "That the number and salaries of the nurses should be increased, a nurses' home should be built, and an expert supervising nurse placed in charge," might be adopted.

Treatment of Broncho-Pneumonia in Children. The custom of applying hot poultices to the chest in cases of bronchitis and broncho-pneumonia in children has fallen into disrepute. The use of the bronchitis kettle, too, is almost an event of the past. The late Sir Benjamin Ward Richardson was one of the first to inveigh against its healthful properties, and in his indictment of it contended that the steam from it condenses on and saturates everything, and claimed that nothing but harm can result from its use. In fact, he remarks that its name of bronchitis-kettle accurately describes its hurtful effects. With regard to poultices, Dr. Hanland Hall says: "To watch a small child with extensive broncho-pneumonia fighting for breath, and then to further hamper its efforts by ordering a poultice weighing about a pound, can scarcely be regarded as a rational proceeding." Many physicians report the excellent results obtained with children of the application of olive-oil to the chest and between the shoulders in complaints of the respiratory organs. Dr. Buxhamer, of Vienna, employs baths of a temperature of from 18° to 22 C. (64 to 72 F.) in the treatment of pneumonia in the young. He asserts that children present but little resistance to reduction of temperature. As a precaution against collapse the bath ought not to last longer than five minutes, and on no account to be continued if the child shows signs of shivering. In *Le Nord Méd.*, Dec. 15, M. Desmons upholds the use of the warm bath treatment of broncho-pneumonia advocated by Prof. Lemoine. His experience of the beneficial results of this method of treatment are remarkable, and he says that he not only rarely loses a case from this complaint, but by giving the baths at the first signs of lung symptoms, he is able often to nip an attack in the bud. In his opinion, it is advisable to give the baths every three or even two hours if the case is a bad one. In some instances the addition of mustard meal is said to render the bath more efficacious. There is little doubt but that the old-time treatment of heavy poultices and bronchitis kettles will soon, even in the most conservative countries, be relegated to the limbo of the past.

Drugs in Infantile Atrophy. The excessive use of drugs is a practice now discarded. Years ago the doctor of the day put his faith almost wholly in the efficacy of medicine, and his unfortunate patients were compelled to swallow all kinds of nastiness. The fact was not recognized that what might suit one constitution would harm another; but people were lumped together and given the same drugs promiscuously. Doubtless many an ill-fated infant came to its end from having poured down its throat the drastic remedies prescribed by the doctors of thirty or forty years ago. In the *Lancet* of a late date there is a sensible letter from an English practitioner deprecating the use of drugs with infants. The writer says: "The young practitioner generally rushes to drugs, and I take it that no one is free from this delinquency. I have had this matter brought very forcibly to my notice of late by witnessing a very remarkable cure in my own practice without the aid of drugs. The patient was three months old, and the mother was an anemic, unhealthy woman. Her milk supply was also deficient. I directed the mother to diet the child on the following lines: To make up a bottle of—cream three tablespoonfuls, milk, two tablespoonfuls, lime-water nine tablespoonfuls, and a pinch of nearly a tablespoonful of sugar of milk. Medicines were avoided. As time went on and the child gathered strength, one or two articles of diet were added to vary the feeding. I have now to report at the end of four months that the child is strong and healthy." Whether the food given was the best or most nourishing to be obtained is doubtful; probably it was not; however, that is outside the question; the point to be pressed home is, that in most cases of mal-nutrition in infants medicine is unnecessary. Judicious feeding should be the sheet-anchor. It should not be forgotten in connection with the feeding of infants, that the quantity of food and interval between meals is of as much importance as the quality of the food given. Many infants are fed too often and too heavily.

Operation for Supposed "Idiopathic Dilatation of the Colon" in a Young Child.

Another remarkable triumph in the field of abdominal surgery has just been achieved. Mr. Frederick Treves, Surgeon to the London Hospital, has recently performed an operation that has never been before attempted, and one that in its radical features may be almost said to rival Dr. Schlatter's now world-famous extirpation of the stomach. The patient in London was a child, aged five years and nine months, who had been suffering from birth from distended abdomen and extreme constipation, latterly attended with considerable pain. When Mr. Treves first saw the child, she presented all the external signs of "idiopathic dilatation of the colon," and after a minor operation, which only gave temporary relief, it was decided to remove the whole of the bowel below the transverse colon. This was accordingly done in October last, and up to the time of the report in the *Lancet* the child was progressing favorably, in fact appeared to have made a complete recovery. Outside the operation itself, the case presents many interesting points. The condition known as "idiopathic dilatation of the colon" is very rarely met with Mr. Treves remarks that the particular term is based upon the assumption that the distension of the bowel is not due to any obstruction of the lumen, and thinks there is strong evidence to support the suggestion that all cases of "idiopathic dilatation of the colon" in young children are due to congenital defects in the terminal part of the bowel; that there is in these cases an actual mechanical obstruction, and that the dilatation of the bowel is not idiopathic. In the instance of the child operated upon by him, an examination of the bowel made it evident that the distension was not idiopathic, but was due to a congenital narrowing, regular and uniform in degree, of the lower end of the colon. Dr. George Cheadle, of the Hospital for Sick Children, in Great Ormond street, London, writing to the *Lancet* of February 25, takes exception to Mr. Treve's suggestion that all cases of "idiopathic dilatation" are due to congenital defects.

Increase of Drunkenness and Vice Among Children in Europe.

On few subjects do opinions differ more than that of the effect of alcohol on the system. All are agreed that an excess is harmful, while the more bigoted take the view that spirits of any description are unnecessary and injurious. On one point, however, there is a happy concensus of opinion, viz.: that alcohol, except in certain conditions resulting from illness, is hurtful in a high degree to young children. Unhappily it appears that in some countries of Europe drunkenness and vice among the young is making a headway. According to Jakubowitsch (reported in *British Medical Journal*) drunkenness is spreading among children in Russia. He speaks of children between four and five years of age as having had delirium tremens. As to inebriata heredity, he had observed the difference between the children of the same parents begotten while the parents were temperate, and those born during parental intemperance. The first children were physically and intellectually normal, while the latter exhibited traces of body and brain degeneration. Parents often carelessly and thoughtlessly gave young children spirits to make their cheeks and their eyes sparkle, and liquors to induce sleep. Thus juvenile intoxication was originated. Norman Kerr, in his great work on "Inebriety," says: "There are authentic cases of children only two or three years of age who, after strong drink has been given them once, have cried for their daily allowence of wine, beer or spirits, and have died prematurely wasting away in a year or two." In some country districts of France, notably Brittany, it is customary to habituate children from their earliest infancy to the use of *eau de vie.* In Great Britain among the children of the poor in the crowded districts of the large towns, sexual immorality is the prevailing vice. An instance of this form of youthful depravity was reported a short time ago in one of the leading English medical journals, the details of which were so utterly disgusting that it was almost impossible to believe that such things could occur in a civilized country. Here we may congratulate ourselves that there is neither any large amount of youthful drunkenness or depravity, that is, speaking in a comparative sense. The assertion, however, has often been made of late that many of the so-called patent tonics contain an undue quantity of alcohol.

Physical Training of Children.

It is now becoming to be generally recognized that the physical training of a child is of equal importance to and in many instances of greater importance than mental training. Up to the last few years this necessary branch of education has been almost ignored, especially in the schools of the poorer classes, but it appears now that the people are awakening to the necessity of caring for the body as well as for the mind. "A healthy mind in a healthy body" is surely as much to be desired in these days as when the words were written by the great Roman poet many hundred years ago. The ancients at least fully appreciated the value of these two most precious of human possessions, and their efforts to attain to a high standard of excellence in both were more thorough and judicious than those of the men and women of these times. The Greek, probably the most highly cultured race the world has ever known, in the gymnasiums paid as much attention to mental as to physical education. The Germans of all the civilized nation of the present era have followed most closely in the foot steps of the Greeks, and their educational system, allowing for the difference in time and ideas, is mainly modelled on that of old Greece; but even they, it is believed by many, lag behind Rome and Greece. In this country, in 1889, only twelve cities, mostly in the west, had introduced gymnastics as a part of the course of a public school education. Since then physical training has been introduced into almost all the large cities of the east. The report of the director of physical training in public schools of Washington, D. C., has lately been published, and the results appear to have been satisfactory, although, as the report says, "It is impossible to test the full measure of success or failure of our efforts. It is in the remote future with school days long past that the lasting influence of such work will be felt by the individual child. That the bodies of our children in school are better formed, better carried, and more gracefully used there is no doubt." That part of the report which refers to school medical inspection is particularly deserving of notice, and is in brief as follows: "I wish to assist in urging systematic daily medical inspection as a means of improving the physical condition of the child in school and reducing the possibility of contagion. It needs the critical eye of the medical expert to detect cases of nervous disorder, low nutrition and diseases in their incipient stages. At intervals of at least one year examinations should be made to discover imperfect vision or defective hearing." Many of the American cities have adopted this plan, and it would assuredly add to the well-being of the children if their example were followed all over the country.

SOCIETY REPORTS.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON PEDIATRICS.

Stated Meeting, January 13, 1898.

Dr Sara Welt-Kakeles presented an infant with an abdominal tumor of undetermined nature.

Dr. W. B. Coley referred to the case of a child about two and one-half years old, who had been brought to him with a swelling reaching up to the free border of the ribs, over the median line and down to the pelvis. It had forced an opening through the muscles in the region of a lumbar hernia, and, on coughing, there was a marked impulse. It was clearly cystic, and the diagnosis was probably hydronephrosis. On puncture, sterile pus was withdrawn. The diagnosis was then changed to probable osteo-myelitis of the spine, or a tubercular abscess outside of the kidney. The case proved to be one of caries of the spine, without any rigidity of the muscles or other evidence of this condition. In 1895 he had performed abdominal nephrectomy on a child, removing a large sarcoma. The child died eight months later from a recurrence. Four recoveries had been reported, but at least one of these had had a recurrence four years after the operation.

Dr. H. Koplik said that in a case of this kind the blood should be examined to exclude any liver tumor. It was probable that this was a tumor of the kidney. The fact that the tumor could be pushed forward from the lumbar region behind favored the view that it was a tumor of the kidney. A large majority of tumors of the kidney occurring in young children were sarcomatous. He believed that in all these cases an operation should be done as soon as the diagnosis had been made.

Dr. J. H. Fruitnight said that some time ago he had reported to the American Pediatric Society a case of cysto-sarcoma of the kidney. The tumor weighed about seven pounds. In this case Dr. Coley's method of treatment by erysipelas toxines had been tried, but as a *dernier ressort.*

Dr. Coley said that in the case referred to by him, in which there had been a recurrence, the toxines had been tried for a short time, but with no lasting benefit.

Quantitative Determination of Fat in Mother's Milk.—Dr. Emily Lewi said that the Babcock centrifugal apparatus required 30 cc. of mother's milk if a control test were made, and this should always be done. In her method, a miniature Babcock apparatus was employed, which required only 6 cc. of milk for the test and for the control. After the centrifuge had been revolved one and a half to two minutes—which corresponded in the Richardson high-gear apparatus to fifteen turns of the handle—the reading could be taken. Commercial sulphuric acid could not be depended on for the test; an acid having a specific gravity of 1083 gave uniformly satisfactory results. The acid must always be poured in on the milk. The fat formed a sharply defined yellow zone in the upper part of the tube, each division of which represented 3 per cent. of fat. In three out of eight analyses, made both with this centrifuge and by the Soxhlet method, there was no variation whatever in the results. Great accuracy could be secured, even without dilution, and as high a reading as 15 per cent. could be made. The apparatus was very useful even in the analysis of cow's milk.

The advantages claimed for the method are: (1) The analysis can be made in a very few minutes; (2) the quantity of milk needed is only 6 cc.; (3) the amount of fat does not affect the validity of the result; and (4) any clinician can make the test with the centrifugal apparatus ordinarily used for examinations of urine, blood and sputum.

Dr. Koplik said that any one who was acquainted with the tedious Soxhlet process would be glad to know of this new and rapid method. In the examination of mother's milk it was most important to determine the quantity of fat and of casein—not the proteids, because there might be a large amount of proteids and only a small amount of casein.

Dr. W. L. Baner said that there was not only an error in using the Marchand tube, but there was some danger connected with the method, as he had had one of these tubes explode.

Dr. Henry Heiman said that he was chiefly familiar with examinations of milk by Dr. L. E. Holt's method, but that method was open to several objections, notably the length of time the specimen must stand before the reading can be made. It had been recommended to turn the centrifuge "one or two minutes," but the length of time the machine runs must affect the result somewhat. For that reason he thought it was far more accurate to use an electric centrifuge with a speed indicator.

Dr. KOPLIK said that the results obtained by Dr. Lewi absolutely tallied with those obtained by chemical analysis, showing that they were not affected by slight changes in the speed of the centrifuge.

Some Practical Points in the Management of Hernia in Infancy and Childhood.—Dr. W. B. COLEY presented a paper with this title. He said that the condition most frequently mistaken for hernia is hydrocele of the cord. The diagonsis could be readily made in most instances if the following characteristics of hydrocele of the cord were borne in mind; a globular, oblong swelling, tense and cystic to the feel, usually situated just outside of the external ring, and often allowing of being pushed up as far as the internal ring. The history of the swelling would make it possible in all cases to differentiate it from strangulated hernia. In discussing the mechanical treatment, the first question that arose was as to when the truss should be applied. The treatment should be begun as soon as the diagnosis had been made, for, even in infants of a few months there was no great difficulty in maintaining the hernia in proper position. He believed that a well-tempered and light steel spring covered with rubber tubing, and with a pad of wood, made the most satisfactory truss for infants. Both the Knight and the Pomeroy trusses were efficient. The pad of the truss should be above the pubic bone, and should rest over the internal ring. It should be the rule to have the truss kept on day and night, and only removed for cleansing the skin. The truss should not be left off until at least two years had elapsed since the hernia was last seen down. This did not insure a cure in all cases, but if the hernia returned after this time it was probably better to operate. Of 240 cases collected by McCready, that had remained cured for an average period of twenty-two years, 58 per cent. had been under the age of one year when the hernia had been first noticed. He had analyzed 26,388 cases treated at the Hospital for Ruptured and Crippled since 1890. Of these, 15,000 were over 21 years of age when they came to the hospital for treatment. The number of children not cured by trusses was between 25 and 30 per cent.; hence surgical interference was necessary for an ideal cure of hernia in many children. The operation should not be resorted to until the truss had been tried for one or two years at least without benefit. Where there was no proper co-operation on the part of the parents, the operation should be done sooner.

The Bassini operation seemed to him to give by far the best results. Of the nineteen cases operated upon by the older methods prior to 1890, 50 per cent. relapsed after the first year. The operation for the radical cure of hernia was really more difficult in children than in adults, because the tissues were more delicate and there was greater danger of injuring the cord. The chief danger was from the anesthetic. He had found a mortality of one-fourth per cent. in upwards of nine hundred cases. An occasional cause of death was peritonitis following wound infection. He had operated upon 230 consecutive cases without a death. Of 290 cases operated upon, he had been able to trace all but ten, and had ascertained that 166 were perfectly well upwards of one year after operation.

Strangulated Hernia in Infants, with a Report of a Second Case Successfully Treated by Operation.—Dr. Charles N. Dowd read this paper. He said that in an article published by him last May he had stated that these children were suitable subjects for operation after gentle taxis had failed. Infants less than one year old endure operation remarkably well, and the mortality is about the same as in adults. Delay after strangulation is the chief source of danger. The mortality was less than 10 per cent. when the operation was promptly done. Since that paper several other cases had been reported.

The patient forming the subject of the present report was a poorly nourished boy of six months who had been admitted to St. Mary's Hospital for Children on November 18, 1897, with a strangulated, right oblique, congenital inguinal hernia. The strangulation has existed for twenty-four hours, and had been brought on, and the hernia developed by an attack of coughing. Strong efforts at taxis had already been made at another institution. The hernia was about the size of a hen's egg and very tense. Taxis for a short time proving unavailing, an operation was performed. Four inches of the lower end of the ileum were found to be almost of a chocolate color. No line of demarcation could be distinguished between the border of the external abdominal ring and intestine. The intestine was returned to the abdomen, the operation was completed after the method of Bassini, and dressing of plaster of Paris was applied over sterilized gauze.

Healing took place by primary union, and convalescence was in every way satisfactory. The patient was discharged on December 3 and was now in excellent condition.

A review of the literature showed that other cases had been reported by seven observers. The children were all under one year of age, and the hernias were all inguinal. The operation for strangulation had been done at periods varying from a few hours to two days after the occurrence of the strangulation. There were 25 cases altogether, and all recovered. The average duration of the strangulation had been 26 1-3 hours, yet there were only two deaths, one in a case of gangrene of the intestine, and the other in a child who was almost moribund at the time of the operation. Prolonged strangulation or severe operations were not well borne, but moderately severe operations were very well borne by young children. Of 211 cases of intussusception collected by Dr. C. L. Gibson, the results were practically the same in infancy, youth and adult life; but if the severe operations, such as resection of intestine, were considered separately, the result was entirely different. Thus, of 19 infants in whom resection of intestine or the formation of an artificial anus was practiced, none recovered. The ordinary operation for strangulated hernia could not be considered a severe one. In performing it, the incision should be made above the point of strangulation, where the tissues are not so tense.

Dr. W. B. De Garmo said that a child who was old enough to have hernia was quite old enough, in his opinion, to have a truss applied. He had frequently applied a truss to infants only ten days old. For both infants and adults he preferred the German silver to the steel spring, because the pressure could be more easily regulated and the metal did not rust. They should be covered with hard rubber, or with rubber tubing. He thought it was very strange that they should still use the Knight brace, with its descending arm, at the Hospital for Ruptured and Crippled. This is a defect in the truss, because as the child bends forward the abdomen rests upon the spring, and throws the pad down on the pubic bone, leaving the inguinal canal unprotected. He liked the "cross-body truss" very much indeed for all children measuring less than sixteen inches. His experience in both hospital and private practice during the past twenty years had taught him that we could not cure all cases of hernia by mechanical means; yet a very large percentage of the cases in private under one year of age could be cured. If the hernia had a true peritoneal covering or hernia sac, he told the parents that it was quite probable that a cure could be effected if the truss were properly worn for one year. In the other cases the truss must be worn two years or more. The ideal operation was that done according to the Bassini method. He had seen a large number of cases of strangulated hernia in children under one year of age, but had not been obliged to operate upon more than one case—a child several months old. In this case, the hernia had been reduced under chloroform on three previous occasions, and he felt that it was time to operate. The child recovered very promptly, in spite of the fact that he operated at the same time upon a hernia of the opposite side.

One method of taxis that he considered very valuable was done as follows: Take hold of the tumor and draw it down, thus lengthening the part in the canal at the point of strangulation; then, without attempting to push it up, it should be squeezed steadily, and its contents forced out. This method would often cheat the operating surgeon out of a fine operation.

Dr. JOHN F. ERDMANN thought that the question of operating depended largely upon the size of the hernia. Where the scrotum contained a large hernial tumor, he preferred to operate early. In connection with the differential diagnosis he recalled two recent cases of epididymitis and orchitis, following parotiditis, which had been sent to him as hernias. He was more in favor of resection of the intestine than of establishing an artificial anus.

Dr. J. B. WALKER said that although Dr. De Garmo's objection to the Knight truss might be theoretically correct, the truss had proved exceedingly satisfactory in a large dispensary practice. In children with a large abdomen, it was occasionally displaced temporarily. Regarding the method of taxis alluded to by Dr. De Garmo, he said that he had that very day seen a woman, sixty-seven years of age, with a history of an irreducible omental hernia. For some days taxis had been tried, but unsuccessfully. A careful trial of the De Garmo method finally reduced the hernia. Suspending the child by one leg while taxis is being performed, often proved very efficacious in effecting reduction.

Dr. THOMAS H. MANLEY referred to the infant's belly-band as a prominent cause of hernia in infants, and suggested that the cure of the hernia could be materially assisted by removing this band. Another point worthy of attention was the removal of preputial adhesions, thus eliminating the straining efforts at urination. Cases in which a hernia could not be kept back by a truss, or in which the hernia was irreducible, as from adhesions, of course, should be subjected to operation. It should be borne in mind that the tendency of infantile hernia was towards recovery. Yet his experience was in accord with a view expressed by Mr. Thomas Bryant, of London—i. e., that these hernias reappear in adult life. As there was no real inguinal canal in infants he could not understand how a Bassini operation could be done on these subjects. He had never seen a strangulated hernia in an infant, although inflammation or incarceration of a hernia in infancy was not uncommon.

Dr. A. E. BIESER called attention to a useful device advocated by Dr. Lange for the management of umbilical hernia. A button made of concentric layers of *French* adhesive plaster is covered with diachylon plaster and strapped to the body. In two infants he had used it successfully for the control of inguinal hernia.

Dr. ERDMANN recalled a case of strangulated hernia in which on performing taxis the hernia, while still strangulated, had been reduced into the abdomen.

Dr. COLEY, in closing, said that he had operated upon seven cases of undoubted strangulated hernia in infants under two years of age, and he approved of performing the radical cure at the same time that the strangulation was relieved, as this seemed to add but little to the danger of the operation. He had never met with a child in whom the intestine was down and adherent in the scrotum. It was very exceptional indeed to find a case of hernia in an infant that could not be controlled by a truss. Surgeons were pretty well agreed that if a hernia did not return for three years after operation, it might be looked upon as a permanent cure. Some time ago he had analyzed 250 cases of relapsed hernia from the records of the Hospital for Ruptured and Crippled, and had found that in 85 per cent. the relapse had taken place during the first year.

Dr. DOWD, in closing the discussion, said that Stern, in 1894, had collected most carefully a long series of cases of strangulated hernia in the adult, and had given the results. The mortality was 18.9 per cent.—not as great as had often been given. In children under two years of age, the mortality was 21.3 per cent.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The Hygienic Management of Dairies.—Dr. E. F. Brush, of Mount Vernon, read this paper. He said that if every one who used milk, or kept a baby on cow's milk, knew how the dairies are often managed, they would feel very differently regarding this important article of food. While many persons drink raw milk without a thought, they would be horrified at eating raw the flesh of the animal furnishing the milk. It was well known that the dairy cow is subject to many and grave diseases, and that every disease in the cow perniciously influences the milk. There are several articles of absolute refuse material which are used as food for the cow, who is expected on such a diet to furnish to man a nourishing and wholesome article of food. It should also be remembered that the cow at the same time that it furnishes us with milk entertains a fetus. Unfortunately it is the exception to find a dairy in which the cows are treated kindly, and fed and cared for properly, yet boards of health seem to be concerned but little with anything but bovine tuberculosis. He believed that when we were able to exclude diseases and contaminations of the milk in the dairy, arising outside of the cow, we would be better able to deal with those coming directly from the cow.

A certain degree of heat would destroy many of the bacteria in milk, but not the toxins. Much study had been given to methods of preserving milk by sterilization, pasteurization and the addition of chemical compounds—it would have been far better to direct attention to the source of the milk supply.

Horses, dogs, cats, rats, mice and fowl are commonly found around the dairies, and these are undoubtedly often the means of infecting the milk, and indirectly the human subject. It is a very common thing to see a wheezing old cat lapping milk from the pail in the dairy, yet it is known that cats often suffer from a disease of the throat similar to diphtheria. Farmers' dogs eat dead carcases about the neighborhood and then come and drink the milk in the dairy. The poultry about the farm are often numerous, and not infrequently diseased, being very susceptible to tuberculous infection; yet they are usually allowed to go in and out of the milk-house.

Another important source of contamination is the milker himself. One of the dirtiest habits is that of wetting the cow's teats to make the milking easier. He had himself seen milkers spit on their hands to wet the teats at the commencement of milking, and afterward dip their dirty hands into the milk in the pail to keep the teats moist during the milking. In this day of bottled milk and bottle-fed infants, the danger of spreading contagion is vastly increased—indeed, Dr. Brush said, it had long been a source of wonderment to him that there was not much more disease disseminated in this way. The milk should be in good and wholesome condition when it reaches the consumer, without the necessity for resorting to any laboratory methods to improve it.

The Municipal Control of Milk Supply in Cities and Villages, with Report of Health Regulations.—Dr. W. H. Heath, of Buffalo, read this paper. He said that there should be a system of State supervision, inspection and license. New York is almost the last one of the eastern states to establish a quarantine againt infected animals. The railroad transportation of milk needs careful investigation and regulation. For instance, milk should not be transported in the same car with decomposing vegetables or fruit, or, as sometimes happens, in the same car with a corpse. In the city of Buffalo, the Health Commissioner has insisted upon the keeping of a record of the dairies, the character of the herds, including the record of the veterinarian, the time of milking, the cooling of the milk, the distance the milk is transported, the character of the water-supply at the dairies, and the physical condition of the dairymen. If these regulations are not complied with, the license of the milk-dealer is revoked, and he is at once thrown out of business.

The question of dairies sterilizing the milk, sealing it and labeling it with the date of milking, etc., he considred a profitable one for study and investigation.

Municipal protection, he said, could be made absolute, and should involve attention to the following points:

(1.) All milk-houses should be of sufficient size, they should be properly ventilated and should be constructed of such material (preferably non-absorbent) as will admit of proper cleaning. (2.) There should be no communication with sleeping apartments, outhouses, etc. (3.) The milk rooms should not be used for any other purpose than keeping milk. (4.) The cooling boxes should be lined with metal, should be elevated above the floors, and properly drained and ventilated, but no drainage from them should directly connect with the plumbing or a system of sewerage. (5.) There should be specific rules for cleaning cans, boxes and utensils in general, and the necessary instructions should be posted in the milk rooms. (6.) The cans should be only of such a size and depth that a person's arm can reach to the bottom and clean them, and they should be thoroughly cleaned before being returned to the dairy. (7.) Each can should be tagged with the character of the milk, its source, the specific gravity, the time of cooling and similar data. (8.) The construction, equipment and care of the milk-house should be such as to obviate the use of disinfectants, and the presence of a disinfectant should be prohibited. In Buffalo, this fact alone is considered sufficient evidence to warrant suspending the license until proper investigation can be made. (9.) During the summer, no milk should be used which is over twenty-four hours old. (10.) The milk on the wagons should be protected from the weather, and in summer, surrounded by ice. It should be delivered only in the early morning, or in the evening. (11.) Milk should not be delivered inside of any house in which there is an infectious disease, nor should empty milk receptacles be received from such a place while the sickness lasts. (12.) A record of routes should be kept in order to follow infectious diseases. (13.) The practice of grocers and confectioners keeping small quantities of milk is objectionable, and should be abolished, as they do not have the proper facilities for such trade. (14.) The adulteration of milk by water or contamination by preservatives, while important, should be considered of secondary importance. (15.) The lactometer is a useful instrument for a *preliminary* test of suspicious milk. In conclusion, the speaker asked: "Why should the state dairies be without state license, though they are required to take out a city license?"

ABSTRACTS.

ROUND ULCER OF THE STOMACH WITH PERFORATION IN AN INFANT OF TWO MONTHS.

A. CADE (*Rev. Mens. des Malad. de l'Enfance, Feb., 1898*) reports a case of ulcer of the stomach with perforation in an infant of two months. While it is not uncommon to find at the autopsies of infants, especially of the new-born and of sucklings, ulcerations and ecchymoses in the gastric mucous membrane, it is not often that the erosions show the characteristics of the simple, round, or perforating gastric ulcer of the adult. Cade's case was as follows: The infant two months old entered the crèche October 4, having suffered from diarrhea and vomiting for a month. On October 17 a furuncular eruption appeared on the back. The stools did not contain blood. The next day the child's condition was more serious, the abdomen distended, vomiting persisted. The patient died the night of the 18th. Autopsy was made 36 hours after death; the body was well preserved. On opening the abdomen, a closed pocket was found containing a rather large amount of a very yellow acid liquid; this pocket was formed between the layers of the omentum, and was limited behind by the pancreas, below by the transverse mesocolon and the colon, above and anteriorly by the posterior wall of the stomach and immediately above by the inferior surface of the liver, which was adherent to the lesser curvature of the stomach. Inflammatory reaction was not very marked, and the fluid did not contain pus. On opening the stomach a single round ulcer was found, opening posteriorly, through which a sound could be easily passed. The stomach contained yellow acid fluid similar to that found in the cyst. No other lesions of the mucous membrane were found. No other abnormalities except a hydronephrosis of the right kidney were discovered. Histological examination of tissue from the immediate vicinity of the ulcer was made, after hardening in formol and imbedding in paraffin. The adhesions between the stomach and the liver were made up of embryonic cells. There were two small irregular cavities containing pus. The gastric mucous membrane showed few changes, no desquamation of the epithelium, no endarteritis or periarteritis. Chemical examination of the fluid showed the presence of lactic and the absence of hydrochloric acid. From the autopsy and microscopical examination Cade concludes that this case was one of simple round perforating ulcer, as uremic, syphilitic, tubercular, varicose and traumatic ulcers could be excluded by the history and the conditions found. All authors agree that the condition is rare in infants and children. After going over the literature of the subject, from which he collects twenty cases in which gastric ulcer was found in patients ranging in age from a few hours to thirteen years, and discussing the various theories of the causation, Cade comes to the following conclusions:

1. Round ulcer of the stomach is found in children, infants and new-born, but is very rare.
2. It shows the same anatomical characteristics as in gastric ulcer in the adult.
3. As in adults, peritonitis from perforation, and hemorrhage constitute the principal complications.
4. The ulcer may occur on any portion of the gastric mucous membrane. It is more frequent in the duodenum.
5. The pathogenesis is not yet definitely known.

GENERAL PATHOLOGICAL RELATIONS OF MIDDLE-EAR DISEASE IN EARLY INFANCY.

Prof. Ponfic, Breslau, (*Aerztliche Rundschau, 1897, vii, 662*), in the *Berliner Klin. Wochenschrift, 1897, 41,* makes the following remarks: The evacuation of pus by way of the Eustachian tubes is not altogether free from danger. It seems to Ponfic worthy of consideration whether a certain portion of those cases of bronchitis and disseminated peribronchitis as well as of lobar-pneumonia which are so frequently met with in the course of an otitis, are not caused by the aspiration of particles of pus which enter the nasopharyngeal space from the middle ear. It seems quite plausible that a drop of pus, which has just found its way through the tubal isthmus and been thrown into the nasopharyngeal cavity, should here be nebulized, and then sprayed, either by a coughing paroxysm or by a natural deeper inspiration, onto any prominent surface or ridge of the neighboring parts. From this part—the apex of the uvula, the arcus pharyngo-palatini, the free border of the epiglottis, etc.—it may be drawn deeper into the respiratory apparatus, whence these small particles will only too readily enter the lungs. According to their size, they will attach themselves either to the lining of the minute bronchioles, rich in blood vessels, or be caught in the narrow infundibula, where they may in a short time produce a similar exudative inflammation as that already existing in the mucous membrane of the tympanum. That such a thing may happen, is intimated by the extraordinary frequency of the complication of otitis media with the various grades of acute bronchitis and peribronchial inflammations. This is demonstrated in a striking manner in individual children by the presence of the same forms of pathogenic bacteria which we meet with in the tympanum, in the purulent plugs which are found in those small inflammatory foci filling the bronchioles and air-vesicles of the lung. Ponfic also sees some danger, though not so great, in the swallowing of small particles of pus which have made their way into the esophagus. There is still another form of autoinfection which appears dangerous to Ponfic for which the physiological reason is quite obvious. The diminished tension of the air, which occurs in the oral cavity during the act of suckling, is liable to exert such an attraction, especially during inspiration, on the exudation within the tubes, or even in the middle ear itself, that particles of pus are drawn toward the nasopharyngeal cavity. As the current of inspiratory air now passes continuously over the Eustachian tubes, and as during suckling, respiration is usually more energetic, the period of suckling is undoubtedly that time in which the releasing and inhaling of the particles of exudate from the Eustachian tubes may most readily occur. This is also the most favorable moment for the currents of air and food which meet one another at this point to mingle and incorporate these infected particles with the food.

THE DIAGNOSIS OF ASCARIS LUMBRICOIDES.

Muller de la Fuente (*Munch. Med Wochenschr., 1897, xliv, 739*) writes that the general practitioner, as a rule, attempts to make the diagnosis of ascarides without a microscopical examination of the feces. The first symptom to make its appearance, generally is the occurrence of sudden acute abdominal pains. The history then shows that slight pains have been experienced before, but which, being transient, were not complained of, or we may elicit where we are dealing with an infant that it had lately been restless, crying a great deal, refusing nourishment, etc., which condition had, however, passed off within a few hours, or a day. These pains are characterized by the difficulty experienced in their exact localization, and it is not rare to find a more or less tender point on pressure over the region designated by the patient. Very young children, who permit the palpation of the whole abdomen without resistance, suddenly start and cry when a certain point is touched, and this is repeated whenever this portion is reached in palpation. The differential diagnosis between inflammatory processes is established by the absence of high fever. A slight rise of temperature, it is true, may occur towards evening, but during the day the patients present a perfectly normal temperature. In exceptionally bad cases the pain is so great that older children moan and cry out. Movements of the bowels are always present; either there is a diarrhea, or quite as frequently the passages are perfectly normal, this being a valuable diagnostic sign. Convulsions have been observed by the author, due to the presence of ascarides. The sudden, nearly epidemic appearance at times, of ascarides in certain localities, presents a peculiar phenomenon.

Exceedingly remarkable is the enormous contraction of the field of vision in cases where intestinal parasites are present. In some cases this may be demonstrated by a very superficial examination.

LUMBAR PUNCTURE.

The following results of lumbar puncture in hydrocephalus have been reached according to the collective reports presented at the Congress in Moscow:

Monti (Vienna) reports 21 cases, which have undergone lumbar puncture after Quincke during the past two and a half years for diagnostic as well as therapeutical purposes in his section; of these, 15 cases suffered from tuberculous basilar meningitis, five from epidemic cerebrospinal meningitis, and one case was that of an acute hydrocephalus following cerebrospinal meningitis. The author comes to the following conclusions:

(1.) Quincke's lumbar puncture only exceptionally yields diagnostic points in tuberculous basilar meningitis, and is, therefore, not capable of replacing the clinical diagnosis.

(2.) From a therapeutic point of view, lumbar puncture in tuberculous meningitis is of no value whatever, according to our present experiences.

(3.) In acute cases of epidemic cerebrospinal meningitis, the cerebrospinal fluid obtained by lumbar puncture yields points for the corroboration of the diagnosis.

(4.) When epidemic cerebrospinal meningitis has existed for a number of weeks, the result of the examination of the cerebrospinal fluid is usually negative.

(5.) As a therapeutic measure, repeated lumbar puncture, in the acute stage of epidemic cerebrospinal meningitis, does not seem to be without favorable influence on the course of the disease, and it may possibly reduce its mortality.

(6.) Puncture of the fontanelle, with or without the injection of iodine preparations, has up to the present time been devoid of good results in chronic hydrocephalus.

Falkenheim's (Koenigsberg) experience relates to 12 cases of acute tuberculous hydrocephalus, which came under his observation at a late stage, in whom puncture was performed. In a few cases temporary improvement was observed immediately after puncture, followed, however, finally by death. In spite of the slight chance of success Falkenheim would recommend the performing of lumbar puncture, but at an early stage, if only on account of the temporary improvement obtained. As regards cases of serous meningitis—attention being drawn to the difficulties of diagnosing between tuberculous meningitis and the infectious form of acute cerebrospinal meningitis—we are compelled, in view of the communications presented, to leave the question open, whether the final favorable result was due to the lumbar puncture; there cannot be any doubt, however, that in quite a number of these cases, lumbar puncture is at least a valuable measure to mitigate the affection. In those cases of chronic hydrocephalus in which developmental disturbances of the brain are present, lumbar puncture is useless. In the others, provided there is free communication between the lateral ventricles, the subarachnoidal spaces of the brain, and the spinal canal, it accomplishes the same good as the more radical puncture of the ventricles, and occasionally scores a success; it should, however, on account of its uncertainty, only be undertaken at the increase of hydrocephalic symptoms, when important functions—the mind or life itself—

are threatened. In chronic hydrocephalus, due to tumors of the brain, a small percentage of cases have been improved, thus justifying the employment of lumbar puncture.

To avoid the occurrence of sudden death—probably caused by the increased pressure on the brain, after communication between the lateral ventricles and the other spaces has been shut off by the occurrence of displacements of the brain caused by the unilateral relief from the lumbar puncture—it is recommended, if the symptoms increase soon after the performance of lumbar puncture, to relieve the ventricles in the second instance by direct puncture. The therapeutic results which have been expected from lumbar puncture have not yet been realized. It can only be said to be on the whole a safe palliative by which, in a series of cases, temporary improvement may be obtained.

Raczynski (Krakau) has treated 26 cases of hydrocephalus with lumbar puncture since the year 1894. These may be divided into two groups. The first group embraces 21 cases of pure spontaneous hydrocephalus (congenital or acquired) for which no cause was known; the second group consists of 5 cases of hydrocephalia following cerebrospinal meningitis. Seventeen of the first group reported at the clinic during the stage in which the circumference of the head was still increasing, and in two of these cases lumbar puncture reduced the size of the head immediately, but within a few days it had again attained its previous size, and finally surpassed it. Raczynski has not once obtained a cure in these cases, nor even amelioration. The puncture was without influence on the course of these cases. Four cases of this group were admitted in the stage in which the ossified bones of the head allowed of no further enlargement. The hydrocephalus had spontaneously ceased, but the less intelligent children could not walk. The reflexes were exaggerated and movements spastic. As these symptoms were referred to the large quantity of water present in the skull, Raczynski was hopeful of great results from the puncture. The results, however, even in these cases, were not brilliant. The cessation of symptoms has been observed by Raczynski in the second group of cases of hydrocephalus following meningitis. The headache became less, and the subjective feeling of pressure disappeared. The impression left on Raczynski after this experience was that we are not able to cure hydrocephalus by removal of the collected cerebrospinal fluid only; we must look for the future therapy of this disease in an explanation of its pathogenesis.

THE TREATMENT OF WHOOPING-COUGH.

Dr. A. WERTHHEIMBER (*Munch. Medic. Wochenschr., 1897, xliv, 802*) insists above all that the patients should be kept in the open air as much as possible, when the weather is at all favorable. The apartments should be thoroughly ventilated, even in cold weather, and the contamination of the air with carbonic acid gas, which is especially deleterious to children under one year of age, should be prevented. To accomplish this Werthheimber insists on rules which can hardly be carried out in all their details in general practice. The patient should have at his disposal two rooms, which he is to occupy alternately every three hours; wood should be used for heating purposes; the best kind of illumination is oil; only the nurse should occupy the room—which should be furnished as simply as possible—with the patient; the expectorations should be caught in vessels containing a disinfecting solution. The diet should be nourishing, moderate and easy to digest; children who vomit frequently should receive their meals soon after an attack. All sweets act detrimentally; the administration of black coffee in tablespoonful doses after meals is advocated by Werthheimber. Psychic excitement of any kind has a bad effect and is to be avoided as much as possible. As to medical treatment, Werthheimber does not advocate the use of morphine, because if given in effective doses it leads to a lowering of the propulsive energy of the cough, and thus is apt to aid in the deleterious accumulation of secretions. Bromoform has not given any material results in his hands. He has only used quinine rarely on account of its bad effect on the digestion in children under one year of age, but he has occasionally obtained a sedative influence from belladonna.

℞	Ammon bromat................	0.1-0.2
	Extr. belladonnæ................	0.005

M D. S.—One Powder, one to three times a day.

Antipyrin, however, has given Werthheimber the best results. He administers it in doses of 0.03-0.05 in one year old children, of 0.1-0.15 in those two years old, and in older children as many decigrammes as the child is old in years, daily; at first one daily dose is divided in two or three portions, then the amount is gradually increased to double the dose, but never more than 1.5 is given; it is frequently advantageous to give one or two smaller doses during the day, and a larger one at night. A healthy condition of the kidneys is of great importance for the safe administration of antipyrin, and this should always be determined first. When inflammatory lung diseases appear the further administration of antipyrin, as well as of most other whooping-cough remedies, is to be discontinued; in these cases camphor may at times be employed. For rendering the ropy mucous fluid, alkaline mineral waters may be employed during the whole course of the disease. Local applications are unnecessary.

DIPHTHERITIC IMMUNIZATION BY WAY OF THE DIGESTIVE TRACT.

Prof. Escherich (*Wiener Klin. Wochenschr., 1897, x, 799*) writes that while Behring has truly pointed out the importance of prophylactic treatment in diphtheria, and believes that the last objection to the practical application of prophylactic immunization has been removed by the manufacture of the dry diphtheria antitoxin preparations, he is of the opinion that aside from its high price, the reason why the prophylactic injection is so infrequently resorted to, must be ascribed to the fact that antitoxin can only be administered by the subcutaneous method. The general public is, as a rule, strongly opposed to any painful procedure. Thus opposition to vaccination exists to-day, even after 100 years of practice, and we must also remember that some physicians deny the safety of diphtheria antitoxin. Still another point is to be considered. The injection can only be administered by a physician. There is, therefore, the cost of the serum and the expense of the doctor's visit and manipulation, which must be repeated in 3-4 weeks, considering the short duration of the immunization. This point is especially to be considered in connection with the poor, as long as the state does not decide to perform the operation gratis, as it does vaccination. But there would be little opposition from the laity if it were possible to administer the antitoxin in any other way than by subcutaneous injection. Some other method seemed especially desirable to Escherich in the case of children, who, as a rule, rebel against subcutaneous injection, and generally do not bear well the hypodermic administration of medicines. Reasoning along this line Escherich asked himself if it were not possible, and in many ways appropriate, to bring the organism under the influence of antitoxin through absorption from the digestive tract. The possibility of producing immunization in this manner has been demonstrated by the well-known "Ammenoder Vertauschungsversuch" of Ehrlich (*Zeitschrift fur Hygiene, 1892, v, xii*). The slight susceptibility of infants at the breast to infectious diseases is, as a general thing, ascribed to the passage of the protection from the immunized mother to the infant, and Schmid and Pflanz have recently demonstrated at Escherich's clinic, that the mother's milk really contained diphtheria antitoxin. It seemed, therefore, natural, at least in infants at the breast, to imitate this immunization by administering the antitoxin per orem. If we were dependent for a proof as to the value of this new method of immunization on clinical experience, Escherich would believe the question still open. Fortunately, however, we have, in the demonstration of the presence of antitoxic elements in the blood serum of the infant at the breast, a simple and sure means of decision. Escherich does not by any means believe this prophylactic immunization to be identical with the increase of the antitoxic property of the blood serum, as demonstrated in animal experiments; nevertheless its appearance after the administration of the serum may be taken as a positive proof that the antitoxins have passed into the blood from the intestinal canal. Healthy children of various ages were chosen, from whom by means of venesection immediately before and twenty-four hours after the administration of antitoxin blood was taken from the median vein. The serum thus obtained was mixed in various proportions with a positively lethal dose of diphtheria toxin, of which 0.4 ccm. killed a guinea pig weighing 1 kgrm. within 48 hours. If we place the lethal dose for this guinea pig at one, the amount of added serum varied between 0.0001 and 5. For purposes of comparison the same proportions were always used in preparing the mixture, before and after the administration of the serum, so that the slightest change in the antitoxic strengh would have been recognized. The amount of serum administered varied between 1,000-5,000 antitoxin units, that is, between 0.11-1.4 antitoxin units for each kilo weight of the child. As a controlling measure the experiment already made by Loos was repeated, namely, to demonstrate the antitoxic value of the blood serum by an increase in the antitoxic strength of the blood serum after a relatively low curative subcutaneous dose.

When the serum was administered internally, pure or mixed with eggs or milk, it was shown that an increase of the antitoxic strength of the blood was either altogether absent or could only be demonstrated in infants at the breast, and in these only after the administration of very large doses. It seemed rational, to attribute the cause of this failure in older children to the deleterious effect which the muriatic acid of the stomach exerted on the antitoxin. In this manner we could explain the fact that in young infants, whose secretion of muriatic acid is, as is well-known, quite small, a portion of the antitoxin enters the blood. It would probably have been possible, by using a coating of keratin, to circumvent this hinderance. But another more simple experiment showed Escherich that this supposition was not correct. If the antitoxic is given as a clysma, there is no question of any deleterious action of the digestive secretions. Antitoxin is readily dissolved in water, and therefore is easily absorbed by the mucous mebrane of the rectum; it might, therefore, be expected, that there would be no obstruction to the absorption of the antitoxin into the blood, if administered in this manner; nevertheless, these experiments also gave negative results. The main question, which Escherich had put to himself, namely, whether it might be possible to incorporate into the human system by way of the digestive apparatus, a sufficient quantity of antitoxin to produce prophylactic immunization, was by these experiments unequivocally answered in the negative. Only in infants in the first few months of life a slight increase in the antitoxic property of the serum seems to occur, after the administration of very large doses of antitoxic serum. Under certain conditions, in which from external causes the performance of a prophylactic injection can only be made with difficulty or not at all, a mixture of the serum with milk might be used as a remedy for immunization against diphtheria; as the feeding of breast milk containing antitoxin seems to procure a certain immunity against infection. As a therapeutic measure, of course only the subcutaneous injection can be taken into consideration. For older children and adults, the subcutaneous injection will remain the only possible form of administration for prophylactic purposes. Notwithstanding this, only partially satisfactory result, Escherich has decided to publish his experiments which have been concluded for some time. for the reason that reports are lately accumulating where physicians for some reason or other—usually from ignorance in the use of the syringe—were led to administer the antitoxic serum by the mouth or by rectum in place of the subcutaneous method. De Minceis (*Gazette degli. Osped, July 19, 1896*), has employed this method systematically in a series of diphtheritic cases, and expresses himself as greatly pleased with the results. In every case, the result was quite as good, as though the remedy had been subcutaneously injected, at the same time no bad results or sequelæ were observed. It is to be presumed, that such reports would lead other physicians to this "easy and safe" way of administering the serum, when disappointments would naturally be inevitable.

Escherich also asks the question: What becomes of the antitoxins, which are undoubtedly absorbed, if they do not make their appearance in the blood; where are they arrested or destroyed? We can only imagine some influence of the living epithelia of the intestine or of some function of the liver, which, as we know, arrests or changes certain substances present in the portal circulation, which fact also seems to be demonstrated by experiments in animals conducted by Escherich.

TWO CASES OF PAROXYSMAL HEMOGLOBINURIA OCCURRING IN SISTER AND BROTHER.

Trumpp (*Munch. Med. Wochenschr., 1897, xliv, 472*), had under his care a boy eight and a girl five years of age, brother and sister, who both periodically passed bloody urine. Prodromal symptoms consisted in malaise, chill and fever; the attack terminated by voiding blood-tinted urine, sometimes of a lighter, at others of a darker color. That both children undoubtedly suffered from hereditary lues, was gathered from the previous history; both had had scarlet fever. To obtain a positive diagnosis an attempt was made to provoke paroxysms of hemaglobinuria through the effect of local application of cold. For this purpose iced foot baths were given lasting half an hour. After two and nine hours, respectively, albuminous urine was voided, in which the bands of oxy and methemoglobin appeared in the spectrum.

Treatment was confined to keeping the patients warm and improving their general condition by a nutritious diet. The administration of antisyphilitic remedies did not seem necessary, in view of the slight symptom. We might take the ground in these cases that the hereditary syphilis was the leading, the infection with scarlatina, however, the determining factor of the affection.

DRAINING THE FOURTH VENTRICLE.

Dr. Alexander Bruce (*Lancet, Jan. 29, 98*), read a paper before the Edinburgh Medico-Chirurgical Society, January 19, 1898, on "Draining the Fourth Ventricle for Acquired Hydrocephalus." In this case, a girl of 13 years of age, with history characteristic of congenital syphilis, marked temporary relief followed operation. The first symptoms of the disease for which the operation was made were headache and pain in the back. Emaciation became extreme, in spite of a ravenous appetite. The head was retracted; pupils dilated, and blindness, whether from the disease or from inattention, could not be made out, came on. There was paralytic distension of the bladder, and the urine contained pus and albumin. Pulse varied from 102 to 120, and the temperature was irregular, sometimes going as high as 103°. No pain except from a bed sore was complained of. Legs and arms were almost paralytic. A corneal ulcer appeared, but healed, to reappear a few days before death. Later external strabismus and nystagmus of the right eye manifested themselves. Dysphagia became more and more marked. On September 7, she was much cyanosed, had rigors and appeared to be dying. As medical treatment had been unavailing, surgical measures were resorted to. Under chloroform narcosis, the retraction of the head disappeared. The patient being laid face downwards, a horseshoe shaped incision was made from mastoid to mastoid, the highest point being just below the occipital protuberance. The soft parts were dissected down to the foramen magnum, and an opening made just above it with a three-quarter inch trephine. The dura bulged into the opening, which was enlarged with the bone forceps. The dura and thickened arachnoid were opened, the medullary tonsils separated and more than ten ounces of clear cerebrospinal fluid evacuated. The parts resumed their normal relations; the dura was left unstitched, no bone was replaced; the soft parts were brought together by interrupted suture. The patient stood the operation well, and soon asked for food. The temperature fell to normal, and remained so for four days, after which it became irregular. Cerebrospinal fluid exuded in large amounts, soaking the dressings two or three times daily. After the stitches were removed, the fluid collected beneath the scalp, causing it to bulge; later a sinus formed. Death occurred three weeks after the operation, not as a result of the latter, and autopsy revealed the existence of basal meningitis and abscess of the kidney. Mr. Stiles, who detailed the steps of the operation, also enumerated the recent cases in which operation has been done for the relief of intracranial pressure, thirteen in number, with five reported as cured. In the subsequent discussion other cases were referred to, and it was agreed that the method of draining the fourth rather than the lateral ventricle, was preferable, and that in nontubercular meningitis it offered a chance of relieving the pressure symptoms and possibly of effecting a cure.

OPERATIVE TREATMENT OF CLEFT PALATE.

E. Owen (*Lancet, Jan. 29, 1898*), in a clinical lecture delivered at St. Mary's Hospital, London, spoke of the operative treatment of cleft palate. After referring to the anatomy and defects in development causing the deformity, and speaking briefly of the effect on the child as regards nursing and nutrition, he passes on to the treatment. He is of the opinion that if the cleft be confined to the soft palate and the infant is in a satisfactory state of health, operation may be done within a few months of birth, but if the hard palate is involved, at least a year should elapse lest the infant should receive a fatal shock from the severe operation. The entire cleft should be closed at the first operation. The preparation of the patient is of great importance. As a rule, the patients are thin and in very poor condition; the first thing is to inquire into and regulate the food. Fresh milk, modified to resemble human milk, is the best food. In addition, massage with olive oil, and cod liver oil internally are to be given, and proper means taken to have the mouth and pharynx in as healthy a condition as possible. If possible, the operation should be made during fine warm weather. The best position for the operation for the child is upon the back, with the head hanging over the end of the table, so that the blood may pass into the nasopharynx, and out through the mouth and nose; but if the hemorrhage is free, the danger of blood passing into the larynx is not entirely done away with. Chloroform is the best anesthetic, but narcosis should not be too deep. It is well to pass a large looped suture through the tip of the tongue before inserting the gag, as by this means the tongue can be prevented from dropping back and hindering the operator. For the operation, Owen advises old tonsil bistouries, which have been often ground, in preference to the ordinary palate knives, as the latter are thick and clumsy. Tenotomy knives are not well adapted for the purpose. Sponges, which should be firmly fixed on handles, should be about the size of a pigeon's egg. Owen uses silver wire and horse hair for sutures. For the operation, Owen proceeds as follows: One side of the soft palate is held and steadied with a pair of long, mouse-toothed forceps, and is then transfixed with the palate knife. By cutting backwards, a thin strip is removed through the entire thickness of the soft palate and uvula; then still holding the strip in the forceps, and cutting forwards, along the side of the cleft, vivify the entire edge. The hemorrhage is arrested, and the next step in the operation is to make a cut about three-quarters of an inch long close to the inner side of the molar teeth of each superior maxilla, passing to the bone, and the muco-periosteum is detached from the hard palate. One blade of a pair of scissors, bent on the flat to almost a right angle, is passed between the detached muco-periosteum, and the under surface of the hard palate; the other through the cleft and over the back of the velum where it springs from the posterior border of the hard palate. The thin layer of mucous membrane which is continued on to the back of the velum from the floor of the nasal fossa, and the aponeurosis of the soft palate, which is inserted into the under surface of the horizontal process of the palate bone thus come between the blades of the scissors. After this cut the whole sheet of muco-periosteum and velum loose. Eight or ten sutures are required, and are inserted in the muco-periosteal flaps, beginning near the incisor teeth. The alveolar incision is to be prolonged backward, if necessary, to reduce the tension on the flaps.

COUGH, ESPECIALLY THAT OF NERVOUS ORIGIN.

SCHECH (*Munch. Med. Wochenschr., 1897, xliv, 701*) says that nervous or reflex cough appears in a great variety of forms. Quite frequently it does not differ in its sound and appearance from the cough of affections of the respiratory organs; frequently it manifests itself in the form of periodically occurring severe, continuous paroxysms of cough, or a continued short cough. In other cases again it is remarkable for its nearly incessant occurrence, and its acoustic qualities; the sound of the cough is whistling, barking, bleating or rough and rattling. A nervous cough is frequently accompanied by other nervous symptoms, particularly hoarseness or aphonia, or by spasm of the glottis, the pharynx or esophagus, clonic and tonic twitchings of the facial or other muscles, also by dyspnea, or even by insensibility (vertigo or ictus laryngis).

It is characteristic of the nervous cough, that it always ceases during sleep, and again recurs on awakening. It is notable that these patients otherwise feel well and retain their appetite. Another property of the reflex cough is the absence of secretion. Very often reddening and congestion of the larynx is present, which is, however, to be looked on as the effect and not the cause of the cough.

The organs from which the nervous cough emanates are in the first place the centers of the nervous system, the brain and spinal cord. It accompanies tabes, chorea, epilepsy, injuries to the cervial region of the spinal cord, or the cervical spinal column, and hysteria. The nervous cough is met with very frequently at the time of puberty in both sexes, being most common between the ages of twelve and seventeen. Etiological factors during this time are sexual excitement, dallying and onanism, also imitation. Of other organs, the ear is to be considered in the first instance. Cough may be occasioned by syringing and cleansing the auditory canal, the placing of cotton in the ear, the presence of hardened ear-wax or foreign bodies; occasionally the influence of cold air on the external auditory canal is sufficient to excite it. Another organ which may be the cause of a cough, but only under pathological conditions, is the nose, as in hyperesthesia of its mucous membrane, in distortions and excrescences of a hypertrophic rhinitis, mucous polypi, etc. A cough is also met with in diseases of the nasopharyngeal space, especially in hypertrophy of the pharyngeal, and palatal tonsils. In females a relatively frequent cause of cough may be found in a hyperplasia of the lingual tonsils. Pressure on the trunk of the vagus, from neuritis, tumors, enlargement of the lymphatic glands, goitre, deeply situated throat abscesses, may produce violent coughing paroxysms, as also pressure exerted by aneurism of the aorta.

Furthermore it is claimed that a gastro-intestinal, a liver and a spleenic cough may occur. The so-called uterine cough rarely occurs alone or isolated, but is usually accompanied by other nervous disturbances. Occasionally it makes its appearance during menstruation, more frequently during gestation, but still oftener in the course of a chronic metritis, oophoritis, adhesions, cicatricial and contractile processes; also in dislocations and neoplasms. During the climacteric it is also met with occasionally, but very rarely later. A uterine cough is exited by the most various causes, at times by great fulness of the bladder or the rectum, coitus, examinations, a fall, a push, dancing, riding, working the sewing-machine, and physical excitement. The uterine cough, as a rule, exhausts the patient extremely, causes pain at the points of insertion of the chest and abdominal muscles, increases abdominal affections, and may lead to miscarriages.

Not only in the female may disease of the sexual organ lead to reflex cough, but also in the male, and particularly inflammation and swelling of the testicles, the urethra and the bladder. The last organ which may be the cause of a reflex cough, is the skin.

It is sometimes extremely difficult to locate the cause. The so-called cocain experiment, cocainizing suspicious or hyperaesthetic points is particularly valuable, in examinations of the ear, nose, pharynx and larynx, when the cough will frequently disappear for some time, recurring again when the effect of the cocain has passed off. The prognosis is in general, favorable, but on account of the extreme stubbornness, and the frequent duration for years of the cough, together with its frequent resistance to all therapeutic measures, it may be designated unfavorable in a special sense. The treatment must in the first instance, be that of the cause; hardened ear-wax and foreign bodies must be removed, nasal polypi, hypertrophic or inflamed tonsils, chronic pharyngitis, hyperplasias of the lingual glands, must be treated *lege artis*. Not infrequently cauterization of the normal, not hyperaesthetic mucous membrane of the nose is followed by a cessation of the cough. In uterine cough the insertion of a pessary is frequently sufficient to suppress the cough at once.

In other cases, a constitutional treatment will be found necessary. Occasionally a change of habitation, the threatening of a painful operation, change of diet and deprivation of alcoholic drinks may cause the cough to disappear. In grave cases, especially in hysterical, pampered and over-indulged children, it may become necessary to treat the patient away from home with hydrotherapeutic measures, combined with gymnastics and internal administration of bromides, iron, arsenic, valerian, valerianate of quinine, phenacetine, etc. Cocainizing the larynx, galvanization of the spinal cord or the superior laryngeal nerve or of the vagus, is, as a rule, not followed by much improvement. The administration of narcotics is to be condemned. In the barking cough of children, a strict watch on the sexual conditions is imperative. At all events, they should not be allowed—school being prohibited—to idle aimlessly around.

A few authors lay particular stress on psychical treatment, combined with a special kind of gymnastics. The patients are to be encouraged to suppress the cough; they are also asked to take long and deep inspirations, and to hold their breath as long as possible, in spite of the coughing paroxysms, which make their appearance during this time; this procedure is to be carried out five to six times a day under the supervision of the physician, and is to be continued for a long time.

Not infrequently, we are sorry to say, this method of treatment, as well as all those previously enumerated, will be found useless, and the cough continues uninfluenced for years, when it may of its own accord suddenly cease.

COLLES' LAW.

Report on the transactions of the section in pediatrics of the 69th Congress of the German Naturforscher und Aerzte zu Braunschweig, Der Kinderarzt, 1897, viii, 265.

Finger presented his views to the combined section of pediatrics, gynecology, and dermatology and syphilis at the 69th meeting of the German Naturforscher und Aerzte at Braunschweig, in the following theses:

I. There exists undoubtedly, a purely paternal heredity of syphilis. Proof:

A.—An exclusive treatment of the father, in unions producing syphilitic children, is frequently sufficient to procure healthy children.

B.—The mother, of expatre syphilitic children, is in the greater number of cases, healthy.

1. She is clinically healthy.
2. She bears later on, healthy children, to a healthy husband.
3. She may be infected, after the birth of a syphilitic child, either by this, or in some other manner.

II. There undoubtedly exists a purely maternal heredity of syphilis. Proofs:

A.—Those syphilitic women, who with different husbands, give birth to syphilitic children.

B.—The pure, post conceptional syphilis.

III. A purely maternal syphilis may be carried to the fetus, through the ovule as well as post conceptional, by the placenta. The second of this kind, the post conceptional placentar infection, has been proven by a series of exact clinical observations (48 cases). The maternal heredity, through the ovule, has not been proven, but may be admitted only through an analogy with spermatic heredity.

IV. Maternal syphilis, even when acquired during the last month of gestation, may still infect the fetus procreated by healthy parents, in utero.

V. The presence of a syphilitic fetus, expatre in the uterus of a healthy mother, is usually not without any retro-action on the latter, and shows itself in various ways:

A.—*The mother is infected.* Conceptional syphilis, choc en retour.

B.—*Early conceptional syphilis.* The appearance of direct secondary symptoms during pregnancy, not preceded by a primary affection.

VI. The fact of the transference of the virus of syphilis by way of the placenta, through the expatre syphilitic fetus, to the mother, has not yet been fully demonstrated, but only admitted by its analogy to post conceptional fetal syphilis. Without doubt a number of cases looked upon as early conceptional syphilis, especially those where the secondary symptoms made their appearance in the mother, as early as the second or third month of gestation, may be referred rather to the initial effect of spermatic infection, which on account of its high position within the uterus or tubes, could not be demonstrated. We are justified in this assumption by the observations made, of the analogous course of syphilis in wives of latent syphilitic husbands, where no intercurrent gestation occurred.

A delayed conceptional syphilis. The appearance of direct tertiary syphilis, not preceded either by primary or secondary symptoms.

VII. Similar to early conceptional syphilis, delayed conceptional syphilis has not been demonstrated in a clinically scientific manner. The great number of observations, by the most exact observers, does not allow a justification of the assumption, that an error of observation has been made in all these cases, the more so as this assumption cannot claim the value of a scientific refuting argument.

A.—*The mother does not become syphilitic*, but becomes immune to syphilis.

VIII. By far the greater number of the mothers of expatre syphilitic children remaining healthy, earn during and by this gestation, immunity against syphilitic infection (Colles' law).

A.—*The mother remains perfectly healthy and uninfluenced.*

IX. In a small number of authentic cases (21 observations) the mother is so little affected by the syphilitic fetus in utero, that she is liable to become infected after the birth of the syphilitic child, from the latter, or in some other way.

X. As exceptions to Colles' law, another group of cases is mentioned, whose introduction seems altogether inadmissible. These cases take their course after the following type: The father, being at the time of procreation syphilitic, the mother presents a primary affection and secondary symptoms late in pregnancy, the child is born syphilitic. The conclusion drawn from these cases, that the mother of the child, which has been infected by the father, can become infected in a late stage of pregnancy, and thus form an exception to Colles' law, is inadmissible, for the reason that the most important premise of this conclusion, that the syphilis of the child was caused by the father, has not been proved and cannot be substantiated, and that a post conceptional placental infection of the fetus cannot be excluded.

XI: The number of uncontraverted cases of exceptions to Colles' law (21 cases) reported up to the present time, is so great that it seems questionable whether the nursing of expatre syphilitic children by a healthy mother should in the future be recommended as safe.

XII. In an analogous manner, the children of syphilitic parents who escape syphilis, also show an immunity to syphilitic infection (Profetas' law).

XIII. A number of undoubted exceptions (15 cases) to Profetas' law, have, however, been published.

XIV. We may probably take for granted at the present time that this immunity against syphilitic infection is an independent one, to be explained by the supplying of toxins from the syphilitic individual to the non-syphilitic organism.

XV. Of the different forms of heredity, therefore, the paternal spermatic, and the maternal post conceptional placental infection, are demonstrated without doubt, the maternal ovular is probable, but up to the present time not proven.

The special relation of the syphilitic virus to the placenta is as follows:

A.—The latter is pervious to the virus in one group of cases. This permeability is proven as taking place from the mother to the child, perhaps also from the child to the mother, but the latter is as yet not positively proven.

B.—The placenta is impervious to the virus, but pervious to the immunizing toxins in a second group of cases, as well in the direction from the mother to the child, or vice versa.

C.—It is absolutely impervious in a third small group of cases. Neither virus nor immunizing toxins can pass, the healthy organism remaining totally uninfluenced by the unhealthy one.

XVI. Under what circumstances and conditions the placenta proves to be at times pervious, and at others not, we are at present unable to say. Most likely the rule can be applied to one series of cases, that the healthy placenta is impervious to the virus, the unhealthy pervious, but the most extraordinary exceptions to this rule are met with, and healthy mothers with paternal syphilitic fetuses in spite of intense disease of the maternal placenta, are observed, as are also healthy fetuses in postconceptional syphilis of the mother, in spite of intense syphilitic disease of the fetal placenta, and even of the vessels of the umbilical cord.

X-RAYS IN ACUTE ARTICULAR RHEUMATISM.

Seokoloff, of St. Petersburg, reports four cases of acute articular rheumatism in children in whom marked improvement took place after the use of the Roentgen rays. The child was placed from fifty to sixty cm. from the tube, and the time of exposure was sixteen to twenty minutes. In one girl of nine years the pain and swelling of the joints, which were very great, disappeared after two treatments, while one girl of fourteen recovered after the first séance.—*La Rev. Med., Jan. 19, 1898.*

PASSAGE OF SUBSTANCES THROUGH THE PLACENTA.

A. Sicard and R. Mercili reported before the Biological Society of Paris on January 15, 1898, the results of their experiments on the passage of methylene blue through the placenta. Injections were made into primiparæ and multiparæ from three minutes to twenty-two hours before delivery. The shortest time taken for the passage of the blue into the urine of the child was one hour and twenty minutes. The women were all healthy, having no history of tuberculosis or of syphilis. In no case did the placenta show any macroscopic change.—*La Rev. Med., Jan. 19, 1898.*

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PEDIATRICS

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ORIGINAL ARTICLES.

TREATMENT OF SUPPURATION OF THE MIDDLE EAR, WITH ESPECIAL REFERENCE TO THE DISEASE IN CHILDREN.*

By WILLIAM CHEATHAM, M.D.,

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A FEW remarks concerning the treatment of suppuration of the middle ear may not be uninteresting, especially because a great many severe cases are the result of neglect, and we should educate the general practitioner to refer these cases to the specialist earlier, or to treat such cases with a greater degree of thoroughness than is done at the present time.

I know nothing easier than the management of cases of inflammation of the middle ear, especially when we get them in the acute catarrhal stage which is known as earache. A great many of these cases occur during acute infectious diseases, and in the great majority of instances the trouble originates primarily in the nose and throat. With proper management of the nose and throat trouble, simple cleansing with antiseptic solutions by means of sprays or the post-nasal syringe, many of the middle-ear affections might be prevented. A syringe or any kind of an atomizer used anteriorly seldom reaches more than two-thirds of the mucous lining of the nose because of the anatomical relations, and consequently cleansing cannot be thoroughly accomplished in this manner. The best means of cleansing the post-nasal space is by means of the post-nasal syringe, but its use is extremely difficult in children. One thing to be guarded against in using the atomizer or the post-nasal syringe is the too hurried blowing of the nose to remove secretions, etc. After introducing medicines by means of sprays or syringes, a few drops will remain in the pockets of the mucous membrane, and if the nose is blown too quickly you are liable to blow it up into the middle ear and cause infection there. I have seen such a case recently. It is better, if you use sprays, to have the patient snuff down from the post-nasal space after a thorough cleansing than to use a handkerchief and blow the nose immediately after an application.

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* Reported to the Louisville Clinical Society.

My treatment in the majority of cases of earache, in which there is no secretion—simply an inflammation or hypersensitive condition of the middle ear—is hot water and the application of leeches. I usually apply four leeches—one to the tragus, one or two inside the canal and one externally. The next best thing when there is no secretion is opium. If there is any secretion in the middle ear, either an increase in the natural secretion of the part, or the condition has gone to the formation of pus, it does not usually get well until an opening is made, and opium is not indicated until a free opening has been established. In suppurative troubles about the throat and middle ear opium is not safe. It is a common remark of surgeons to never give opium in a case of appendicitis, as it masks the symptoms so that the true condition of the patient cannot be ascertained; the same rule holds good in suppuration of the middle ear. I am in the habit, therefore, of depending upon hot water and leeches, and if there is no secretion in the middle ear I use opium; but if secretion is present I never use opium until the secretion is evacuated. If there is secretion, the first indication is to let it out, and especially is this true if the attic is involved, because the connective tissue in this situation may be the means of extending the suppuration, and we are more liable to have brain complications. An incision should be made if there is any secretion which causes bulging of the drumhead. Then, after the incision is made, and you get good drainage, the next indication is to wash out the ear thoroughly with antiseptic solutions.

I saw a strange suggestion the other day in one of our medical journals, made by some gentleman who claims to wash out the middle ear through the Eustachian tubes with a Eustachian catheter. This is an exceedingly dangerous method, even if both ears are involved, and more dangerous, it seems to me, when only one ear is affected. In using a catheter in this way it is very dangerous, because fluid escapes around the catheter and is liable to cross into the opposite ear and produce trouble there. In view of this, I would hesitate to recommend his method. The first indication is to get free drainage; do not make a small incision, but a large one, and especially ought the attic to be opened early in the course of the trouble if it is involved in the suppurative process. I had a case not long ago in which the attic was so involved that the roof of the canal dropped down and I could not make out the drumhead at all. An internal incision was promptly made, but notwithstanding this the pus showed externally, and I had to make an incision behind the ear and establish drainage at that point.

In simple catarrhal inflammation without suppuration or much hypersecretion probably the best method of treatment is to use hot water with a fountain syringe. The method of using the syringe is important. There are very few tubes of the fountain syringe that are properly made for use in the middle ear. The tubes are too large. To overcome this difficulty I have been in the habit of taking a medicine dropper with a good, free opening, and attach the glass part to the fountain syringe in place of the rubber nozzle, and to the end of the medicine dropper I attach a small piece of rubber tubing. This syringe should be held only a few feet higher than the patient's ear, so as not to give too much force to the current, but sufficiently high to give a free flow of water. If you have the syringe too high you will get too much pressure and will have nausea and other disagreeable symptoms. The water should be as hot as can be borne by the patient. I use carbolized water, 15 to 20 drops of carbolic acid to a pint of distilled water. This combination relieves the pain, it is a mild local anesthetic, and is very satisfactory in the management of these cases.

If the symptoms are not controlled by the application of hot water, leeching, or opium, and the case goes on to that stage in which there is bulging of the drum membrane, then the proper treatment is an incision. But few general practitioners are able to tell when there is fluid in the middle ear, and they go on treating the case until the drumhead has ruptured. On the other hand, the drumhead may not rupture, suppuration may extend the other way; you may have a remarkably thick drumhead and the secretion will extend the other way. Should the drumhead rupture under pressure, you are liable to have the whole drumhead swept away by the sudden escape of fluid. It is much better to make an incision instead of allowing rupture to take place spontaneously. The old method was to poultice until relieved. Meantime you have pressure, increased pain, and probably extension of the trouble; the indication here is to get free drainage early in the disease. After you have evacuated the fluid, keep the ear aseptic by proper applications so the fluid will not become muco-purulent or purulent in character.

I want to speak of this subject particularly, as the specialist seldom sees these cases until they have been treated for some time by the general practitoiner; in many of them the drumhead has ruptured before they are referred to the specialist. I have had an unusual number of cases of acute suppuration of the middle ear lately, and some of them had gone on to mastoid involvement before they reached my hands.

I would urge the family physician to either study these cases more closely and be able to treat them better than they do now, or refer such cases to some one who knows how to do so.

Dr. T. P. Satterwhite: I am very glad to hear the remarks made by Dr. Cheatham, and fully agree in what he says. Cases of ear disease which fall into my hands are promptly referred to the specialist. It is astonishing how few doctors know how to properly treat the ordinary earaches and other ear diseases, especially those of childhood, and it is exceedingly important that they be attended to in the initial stage, otherwise the case becomes much more serious.

Dr. S. G. Dabney: Dr. Cheatham has given us an interesting resumé of the treatment most men pursue in regard to acute affections of the middle ear. The point of interest that attracted my attention particularly was the use of opium in the early stage; I am a believer in it. I generally give these patients in the early stage a little phenacetin and Dover's powder. I think I have met with some criticism by Dr. Cheatham himself for advocating the use of opium in these cases. I read a paper on acute affections of the middle ear before one of our medical societies a year or two ago, in which I emphasized the point that opium in the early stages does a great deal toward preventing complications. In a discussion before the Kentucky State Medical Society the point was brought out, and some of the gentlemen present differed with my views and thought it unwise to use opium in any case, because by so doing you are liable to conceal important symptoms. The *possi-*

bility of concealing important symptoms is a matter which should be borne in mind, and opium should not be long continued. We all understand, too, that it is especially important when we use remedies to allay pain that we look frequently at the drum membrane to be sure that pus is not accumulating behind it.

Dr. Cheatham spoke of infecting the second ear by the Politzer apparatus. It certainly would seem to be possible, yet I cannot help believing it is a rare occurrence. I noticed an article, which he has also doubtless read, in the last number of the *Medical News*, New York, by Bacon, in which he states there is danger of blowing infectious material into the middle ear by the use of the Politzer bag, and he recommends that we substitute for it the catheter. It must be remembered that a large number of these patients are little children, in whom the introduction of the catheter would be difficult and painful, and under the ordinary precautions if we first spray out the nose thoroughly, and direct the patient to hawk so as to clear the naso-pharynx, it is hardly possible that we will drive any infectious matter into the middle ear.

Leeching, hot water and internal remedies I believe, are our mainstays in the treatment of middle-ear affections before the formation of pus. The books, however, still recommend that we drop certain medicines into the ear, and it does seem that in some cases this method is of value, but whether the good effect is from the drug itself or the heat, as they are usually used hot, it would be hard to determine; benefit has been derived from the solution of atropine recommended by Williams, of Boston, many years ago—sometimes combined with morphine, carbolic acid and cocaine, before suppuration has taken place, or even during the suppurative stage. I have frequently pursued such treatment, but believe more in hot water than I do in medication.

In regard to complications: Many of them can be aborted by timely and energetic measures. I think Dr. Cheatham might have said a little more about the incision in the drum membrane than he did. As an illustration, I may mention briefly this case: A young lady came to my office some weeks ago and said that after blowing her nose violently she had been taken with intense pain in the right ear. She was stiff suffering. There was at that time no perforation of the drum membrane, and no evidence of trouble about the canal, pain having commenced only a few hours before. Her temeprature was 102° F., and she was in great distress from the pain. I sent her home and ordered hot applications, telling her to let me know if she did not get relief, and I would come and apply some leeches. ,She lived some distance from the city and I did not see her again for two days, when she told me she had gotten better for a time, then that the ear had broken and she obtained temporary relief. She had a perforation, and it would have probably have been beter if I had made it myself. Two or three days later, one Saturday night, she was taken with violent pain in the mastoid region. Discharge from the ear had ceased. Her temperature when I saw her that night was 102° to 103° F. There was no swelling over the mastoid, but a great deal of tenderness, drumhead slightly bulging. I carried several leeches with me when I made the visit because I thought they might be needed. I applied three over the mastoid process. I then made an incision into the upper and posterior portion of the drum membrane, just near the opening from the attic of the tympanum into the mastoid cavity. That is a feature of considerable importance in these cases. Generally it is advised to make an incision in the lower part of the drum membrane, but when this complication is threatened a free incision over the upper and posterior portion will in many cases abort suppuration of the mastoid.

Dr. Cheatham spoke of the attic cases being attended by a great deal of depression of the posterior wall of the drum membrane, and that subsequently in one of his cases it pointed externally. It seems to me when the case advances to that stage where there is sinking of the posterior and superior walls of the drum membrane, there is already mastoid disease. This is one of the most characteristic symptoms, and an exceedingly valuable one of pus in the mastoid cavity—a sinking in of the posterior and superior walls of the auditory canal. The anatomical reason for it is very plain. If you will examine the anatomy you will see that the front wall of the mastoid cells and the antrum form the upper and posterior wall of the auditory canal; therefore pressure on these cells pushes down that wall. It is a symptom to which we may look as of great diagnostic importance. I should supose in the case Dr. Cheatham mentions there was already pus in the mastoid. The temperature is of very little value as a guide in these cases, particularly in grown persons (rather more so in children), as we may have slight elevation of temperature and yet a very considerable mastoid involvement.

The Doctor might have said something, too, about the different methods that are in effect for treating these suppurative troubles of the middle ear after the first few days. While the hot antiseptic douche is not universally considered the best method of treatment, I still believe in it. There are a great many gentlemen who do work in this line who have substituted cleansing with cotton, followed by the insertion of iodoform gauze. I notice Seth Bishop, of Chicago, in a recent article in the *Annals of Otology*, recommends nosophen gauze. I have never been able to bring myself to believe that dry cleansing and gauze simply packed lightly down in the auditory canal would be as valuable or effectual as a cleansing agent as the hot douche. It is important, however, to wipe the ear thoroughly dry directly after using the douche or any other similar agent.

Tuberculosis in the family is certainly of great importance in these ear cases, largely because they run such a painless course. Much bone will frequently be involved in such cases, with little pain; a tuberculous process may occur in the mastoid, or at least mastoid disease may occur in a tuberculous patient, with very few symptoms. I have had this illustrated to me more than once.

Dr. William Cheatham: Dr. Dabney refers to the use of opium in these cases: I do not remember to have ever objected to opium in certain stages. A man must be able to tell whether any bulging exists or whether there is any fluid present in the middle ear cavity. Opium not only controls the pain, but it is curative. While it is curative, it is a dangerous thing to recommend to the general practitioners, because they are liable to use it without being able to make an examination to see whether there is any fluid in the middle ear or not. Dr. Dabney also spoke of there being no danger in inflation: The most serious case I ever had, one in which I was the consultant, the attending physician made the patient blow to see if the drumhead was open, or whether it was seriously involved, and from that time on there was intense pain in the fellow ear, which went on to suppuration, the case becoming a very serious one.

It has been claimed by several writers that there is a special bacterium which is responsible for the suppuration in these cases. In one of my recent cases a specimen of the pus was examined by Dr. Henry H. Koehler, and he found the bacterium and made several pure cultures from it. It is called the micrococcus of sputum septicemia (Frankel), a pure culture of which is rare. If this bacterium is the cause of the suppuration, and one ear only is involved, by the method of inflation the organism may be forced over into the middle ear of the opposite side, and cause similar trouble there, which might be avoided by other methods of treatment. I am satisfied that I have seen this occur in several instances, and am therefore led to state that there is considerable danger in inflation.

Dr. Dabney refers to drops, etc.: I have used morphine, atropine, cocaine and carbolic acid for this purpose, and have never seen any good results. It is questionable whether the effects claimed by those who use this method are from the medicine dropped in the ear, or whether from the heat to which the different agents are brought before being dropped into the ear. I have seen cases of intense earache in children in which the patients were very restless and suffering great pain, in which blowing the hot breath into the ear—and the old-time remedy, tobacco smoke blown into the ear, produces the same effect—or a few drops of hot water, have brought about complete relief and the patients dropped off to sleep. Some writers recommend dropping oil into the ears for relief of earache. I consider this extremely dangerous, because of the aspergillus growth which is likely to follow. I sometimes use half glycerine and half water dropped into the ear as hot as the patient can bear it.

There is considerable danger in the use of poultices if not applied lightly, especially in certain stages of involvement of the ear; but I do not apply the poultice over the ear. It is better to make it horseshoe shape, or make it round with a hole through the center for the auricle, otherwise you are apt to get a spongy condition of the canal, and the production of furuncles, which may be exceedingly troublesome. This is one point in favor of the dry treatment.

The incision should be made where there is bulging: If the bulging is below, I make the incision there. If the bulging is below, it is the middle ear which is involved and not the attic. If bulging occurs above or in the superior or posterior wall, then we are liable to have attic involvement. I have seen several cases in which there was bulging at the lower portion of the drum membrane in which I do not believe the mastoid was involved, because recovery took place too readily. If pus shows behind, make a free incision, establish drainage, and the patient usually gets well promptly.

As to the use of the catheter: I seldom treat a case of suppuration of the middle ear without using the catheter. The question has been discussed lately whether you should use irrigation in middle ear troubles. It has been my observation that if you make free drainage and use plenty of hot water relief is prompt. I not only use a catheter in these cases, but often use a bougie. In chronic ear troubles I frequently use a bougie.

Dr. Frank asks how are we to tell whether there is fluid in the middle ear: There is but one way and that is by a proper examination. You may have fluid in the middle ear without pain. I have seen a number such cases. On the drum membrane there are three or four landmarks to watch. (1) Shrapnell's membrane, (2) the short process, (3) the long process and (4) the light spot. You must have an accurate understanding and appreciation of the normal anatomical relation of these parts in order to determine whether there is a bulging or sinking of the drum membrane. If there is a sinking you get a very much shortened long process, a prominent short process and a displacement of the light spot. If there is bulging all the landmarks are wiped out. It is only by an educated or practiced eye that you are able to tell whether the drum is bulging or not from the position of it. You may have bulging and rupture of the drum without pain; if the nerve distribution to the drum membrane is not very extensive, and especially if the drum is thin, pain is often not a factor in the case. In children often the first symptom is a feeling of fulness about the ear, and the child may wake up the next morning with a discharging ear; you may have active suppuration of the middle ear without pain being present.

Another thing recommended in these cases is the application of cold to the ear. I have frequently been called in consultation where other gentlemen had advised cold applications. Cold applications continued for any length of time incur the same danger as opium; cold is a local anesthetic, and you conceal the symptoms. It is not wise to use cold applications longer than twenty-four to forty-eight hours, and it may be accomplished by means of the icebag or the cold coil, which is recommended by some writers.

Dr. Dabney refers to the use of gauze: From his remarks I gather that he means packing the ear with gauze. This method should never be used; gauze should be in the shape of a small ribbon and should be placed gently into the ear until it barely touches the middle ear; it should never be packed into the canal. The trouble about gauze is that it irritates the canal. The nosophen gauze he mentions is said to be the only kind which will not produce any irritation.

As to the method of cleansing: I think there is nothing equal to hot water. How a man can put in a piece of absorbent cotton and cleanse the middle ear successfully I am at a loss to understand. If there is a large hole in the drumhead, an excellent cleansing agent is the peroxide of hydrogen; if there is but a small perforation, I think the peroxide dangerous. Even a weak solution of peroxide will reach all the pockets in the canal, and it is an exceedingly valuable antiseptic, but unless there is a free opening it may force pus up into the mastoid cells. After using peroxide of hydrogen, I always cleanse the canal with hot water. There is some danger in the too early use of antiseptic solutions, especially such agents as boric acid; if used too early it will be sure to lead to more acute inflammation. Various antiseptic solutions have been advised from time to time, such as iodol, alcohol, boric acid, etc., etc., but most of them are attended with some danger if used too early in the course of the disease. I think it is a good plan to encourage free suppuration in some of these cases, and then it may safely be checked later by the application of some of the antiseptic solutions. I had a case a few days ago with acute suppuration of the middle ear, and the attending physician had advised something to check the discharge. I rather encouraged suppuration for a few days, as this is Nature's method of depletion, using hot water freely; then after the acute stage had passed, used boric acid, and the patient made a complete recovery.

RETENTION OF URINE, AND EDEMA OF PENIS FROM CONSTRICTION BY HAIRS.

By Julius Morgenstern, A.B., M.D.

THIS case presents some interesting points and I therefore place it on record.

The patient was a boy one year old. He wound some loose pieces of hair about the penis at the penoscrotal junction.

The mother paid no attention to the baby at this time, but later she was surprised to find an extemporaneous growth of hair around the boy's penis.

On examination, I found an edema of the prepuce. There was some swelling over the pubic region due to the retention of urine, as the spongy portion of the urethra was constricted by the hairs, thereby shutting of all passage of urine.

The mother tried to unravel the hairs, but her efforts were rewarded by sinking the hairs still deeper into the skin of the prepuce. This caused more edema of the penis, and more suffering for the child.

The hairs were grasped at the constricted portion with small splinter forceps, and then cut through with a small pair of sharp-pointed scissors (dull-edged scissors could not have been passed under the hairs at the constricted portion). With the help of the small splinter forceps the hairs were with difficulty removed from the preputial skin in which they were imbedded.

The baby was at once given a Sitz bath and his genitals thoroughly cleansed.

For the edema of the penis, absorbent cotton compresses dipped in diluted lead water (a few tablespoonfuls of lead water in a small basin of water) were used.

However, no urine was voided and the pubic region was still somewhat swollen. Warm sweet oil was then rubbed over the pubic region, and warm cloth applied. Spirits of nitrous ether was given in five drop doses in a little sugar water every quarter of an hour.

The urine was passed in a few hours. In the morning all the swelling over the pubes and all the edema of the penis had disappeared.

ACUTE APPENDICITIS.*

By A. Morgan Cartledge, M.D.,†

Professor of Gynecology and Abdominal Surgery in the Louisville Medical College, etc., Louisville, Ky.

THE specimen which I desire to exhibit is of no special interest, except as demonstrating a new method of preserving pathological specimens. It was removed from a boy twelve years of age two weeks ago last Tuesday. It illustrates the advisability of timely operation in certain cases of acute inflammation of the appendix vermiformis. The

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[*] Reported to The Louisville Medico-Chirurgical Society.

[†] Boston Medical and Surgical Journal.

natural condition and even the coloring of the specimen is beautifully preserved by the method employed, which is known as the Kaiserling process, the work having been done by Dr. James B. Bullitt of this city. As to the method of preservation, the following, quoted from an article by Whitney of Boston, may be of interest:

"The necessity for preserving anatomical specimens with their natural colors has always been felt, and the impossibility of retaining the delicate shades which are indicative of many of the morbid processes has always been a great bar to proper teaching of pathology. With the introduction of formaline as a hardening agent and the modifications in its use recently published by Kaiserling, it seems as if the collections of the future would be able to present something for the student besides variations in shape and size and fractures; for this is all that can be readily seen by him now, and his imagination has to supply the rest. * * *

"The method is simple; the only precaution to be observed is not to put too large pieces in the preserving fluid, and to be careful to change them at the proper time. As some shrinkage is inevitable, cavities should be distended with absorbent cotton, which, of course, is to be removed when the specimens are changed. Moreover, freshness of the material adds greatly to its chance of good preservation, and soaking in water (whereby the blood coloring matter is diluted) is to be avoided.

"Sections should be made with a sharp knife, and the blood which may have been smeared over the surface removed by pressing (not rubbing) a dry, clean cloth upon it. They are then to be submerged entirely in the fluid, best with a layer of absorbent cotton over them. In this manner, portions of the skin showing stab or bullet wounds, or even extensive ecchymosis, could be preserved, a little cotton being inserted to keep the edges of the wound apart * *

"As regards the length of time they will stand, it depends upon how fresh the substances are, and how carefully they are guarded from a bright light. They have stood the test of a year already, and it would be hardly necessary in any legal case to preserve a specimen longer than that * *

"Following is the method: * * * Slices of organs from three to five centimeters thick, are placed from three to five days in

Formaline	200 c.c.
Water	1000 c.c.
Nitrate of potash	15 gm.
Acetate of potash	30 gm.

"They are then removed, the fluid allowed to drain off and the specimens are placed in

Alcohol 80 per cent. for six hours, then
Alcohol 95 per cent. for two hours.

"From this directly into

Water	2000
Acetate of potash	200
Glycerine	400

for permanent preservation in a dark place."

You will notice that the specimen shows perfectly a condition of the appendix about to rupture. The operation was performed twenty-four hours after the initial attack; you can see the injection of the blood vessels, with marked discolorization at two points near the distal extremity where rupture was about to take place. The appendix was bent so as to be plainly felt beneath the abdominal wall; it was exceedingly tense, and could be easily outlined through the abdomen even before administration of the anesthetic.

Chloroform was administered, and a short incision made by the Gridiron method; the appendix came immediately into view, and by hooking the finger beneath it, the appendix in this tense condition was easily raised out of the abdominal cavity and severed near its attachment to the cecum. The edges were turned in and sutured and the stump dropped back without drainage.

This case shows the wisdom of early operation for appendicitis, as here we have an appendix that would undoubtedly have ruptured within three or four hours, and might have excited a fatal peritonitis. It shows further that these acute cases can be treated with as much simplicity as recurrent attacks, without sepsis, as rupture has not taken place, though the material contained in this appendix is probably virulently septic in character.

The abdomin was closed without drainage, with one line of sutures beginning on the peritoneal surface the first stitch passing through the fibres of the muscle, not more than two stitches to the fibres of the internal oblique and not over four or five to the external oblique; the skin closed with a subcutaneous stitch, and covered with collodion, the wound never dressed.

The boy left the infirmary in nine days after the operation. He had a little pain for the first three hours after the operation, but no other symptom of importance, and has made a complete recovery.

Contribution to the Application of Venesection in Uremia.—Lissner (*Centralbl. f. Kinderheilk., 1897, ii, 164*) has, in the following case, noticed a perfectly astonishing result from blood-letting, which proved itself to be a life-saving measure, so that he feels constrained to recommend it warmly in similar cases.

An eight-year-old, well developed boy became ill on the eleventh of November, 1896, with a seemingly light form of scarlet fever. The disease seemed to have run its course, when a severe nephritis was added as a complication on November 29. The eyelids became edematous, the urine contained about one per cent. of albumin, also white and red blood-corpuscles, kidney epithelium and numerous granular cylindrical casts. The heart was normal, pulse 96, somewhat tense, no fever. Hot packs, purging, diaphoretic and diuretic measures had absolutely no effect; the quantity of albumin remained the same; the general condition, at first very good, became worse, and suddenly in the night from December 7 to 8, four uremic convulsions occurred in rapid succession, each having a duration of half an hour, affecting the right half of the body especially. When Lissner saw the patient in the forenoon of December 8, the former was somnolent. As the convulsions recurred, Lissner administered chloroform, without being able, however, thereby to reduce the number of the convulsions; the latter returned during the afternoon with greater violence and more frequently, and the child seemed already lost. To leave nothing untried, however, Lissner took about 100 gr. of blood from the right median cephalic vein. As already mentioned, this therapeutic measure was crowned with striking success. After the occurrence of a few more slight attacks, the patient remained free from convulsions, slept quietly during the night; the albumin now disappeared slowly but steadily after a short time, and the patient was discharged cured.

EDITORIAL.

ABNORMALITIES IN THE URINARY APPARATUS OF CHILDREN.

ASIDE from hypospadias and kindred conditions involving the urethra and bladder, physicians frequently meet with abnormalities of the other portions of the urinary tract in children. In a certain number of cases where such abnormalities exist they are unrecognized during life and are not sought for after death, but that they do occur with greater frequency than has been generally believed would seem to be indicated by a valuable lecture delivered on February 7th, before the Medical Society of London, by Mr. Morgan, one of the surgeons to Charing Cross Hospital. In a consideration of the abnormalities of the kidney this gentleman points out that it is perfectly possible for the fetus to attain to the age of seven or eight months of intra-uterine life with kidneys, wanting or rudimentary, the ureters obliterated and the bladder undeveloped. In other instances children live for considerable periods of time after birth, or perhaps indefinitely, with a horseshoe kidney the convexity of which is always downward and which is generally placed lower than the level of the normal gland. That this condition is, however, very rare may be judged by the fact that Mr. Morris found only 19 instances in nearly 14,500 post mortem examinations, or about 1 in 1,600, and in the Great Ormond Street Hospital for Sick Children, in London, out of 2,594 autopsies during a period of 24 years only three instances of horseshoe kidney were found. In regard to absence of the kidney, Mr. Morris has stated that it occurs in not more than 1 in 3,500 autopsies, although aborted or atrophied kidney is more frequent. The absence of the kidney, or its presence in rudimentary form, gravely complicates a diagnosis and seriously influences our advice as to an operation, which may be thought to be indicated upon a kidney which is manifestly present.

Curiously enough, abnormalities of the ureters are more frequent than the conditions so far described. Quite frequently multiple ureters are present, each ureter being attached to a distinct pelvis of the kidney, and Shattuck has expressed the belief that all these instances of multiplication of the ureter are a reversion to the lower type, as in amphibia there are as many ureters as there are segments of the mesonephric kidney. Such multiple ureters do not possess great clinical interest, but lesions of the ureters themselves, which possibly result in hydronephrosis, are of very great importance in diagnosis, as large swellings in the abdominal cavity produced by hydronephrosis may take place in children and produce an erroneous diagnosis. Thus in 20 out of 52 cases of hydronephrosis, Sir William Roberts found a conginital malformation, in 4 the ureter was imperforate, and in 3 it entered the pelvis of the kidney too obliquely, while in two others a supernumerary artery by crossing the ureter near its origin so compressed the ureter as to obstruct it. Such accidents, however, do not necessarily result in the early death of the patient as Dr. Hare, of London, has reported a case in which disease of the ureters resulting in hydronephrosis permitted the patient to survive to the age of 38 years.

These hydronephrotic cysts are exceedingly interesting not only from a pathological point of view, but from a diagnostic point of view, as we have already stated, for it is almost impossible in some cases to determine whether an abdominal swelling is due to this cause or to other rare pathological conditions. If the condition of hydronephrosis involves both kidneys death usually occurs very early in life, but unilateral hydronephrosis may not result seriously for many years. The swelling which it causes, particularly if for any cause the ureter becomes imperforate, may be suddenly manifested and may be confused with a number of other conditions, such as perirenal hematoma, or perinephritic abscess, or both of the latter may be excluded should there be no history of an injury. Ovarian cysts in children are exceedingly rare, arise lower down in the abdominal cavity and would probably be covered to a certain extent by the colon in front of them. Hydatids of the kidney are exceedingly rare in children and still more rarely we find a condition of cystic hygroma, such as has been described by Smith, before the Pathological Society, of London. In this case a tumor weighing 14 pounds was removed from a child 17 months old, the growth having been noticed when the child was three months of age. This growth did not cause any impairment of health until it was of sufficient size to produce interference with the functions of the abdominal viscera.

As an interesting example of the way in which hydronephrotic cyst may develop, and the manner in which it may resemble ascites, attention may be called to a case reported by Mr. Cæsar Hawkins, in the Transactions of the Royal Medical and Chirurgical Society. In this instance a cyst filled the entire right side of the abdomen of a boy of six years and in the walls of the cyst was found a third kidney with no excretory duct. This cyst was punctured during life and five pints of fluid containing urinary salts were found in it after death. All fluid swellings in the abdominal cavity of children cannot, however, be placed to the credit of hydronephrosis or ovarian cysts, for Treves has pointed out in his work on surgery that mesenteric cysts often attain considerable size, and as late as July, 1897, Moynihan has recorded the case of a girl of six years, where a cyst of the mesentery was multilocular. Other cases have also been recorded in which such cysts attain very large proportions. In one case reported in the *Annals of Surgery*, for June, 1897, such a cyst developed in a boy of 8 years, was twice tapped and finally removed, being found to be multilocular and attached to the great omentum by its entire width.

An interesting point in the diagnosis of congenital hydronephrosis, which Mr. Morgan believes to be definitely reliable as indicating the nature of the tumor, is the situation, subsidence of the swelling followed by an increase in the flow of urine, these changes being brought about by the escape of the fluid through the ureter. Instances are mentioned by Morgan in which systematic rubbing of the swelling caused escape of large quantities of urine, with subsidence of tumor. Where this method of treatment does not relieve the swelling it can be relieved by frequent tapping, but it is to be remembered that the fluid withdrawn does not usually possess any of the characteristics of urine, the fluid either being perfectly clear, containing small quantities of salts, or in other instances being of a turbid appearance containing altered blood, albumin and urea. In connection with hydronephrosis it is not to be forgotten that congenital cystic kidney may sometimes occur, producing swellings similar to those of ordinary hydronephrosis.

Morgan's paper upon these subjects, to which we have already referred, is of great interest not only to the surgeon, but to the medical diagnostician and deserves careful attention from both these portions of the medical profession.

SOCIETY REPORT.

THE PHILADELPHIA PEDIATRIC SOCIETY.

January 11, 1898.

J. P. CROZER GRIFFITH, M.D., President, read the following address:

The Philadelphia Pediatric Society has just completed the first year of its existence and it has become my pleasant duty, as its president, to review the work which it has accomplished, and perhaps to look forward to what may reasonably be expected of it in years to come. Comparing the uncertainty and doubt which attended the incipiency of the organization, with the success which has attended its existence hitherto the Society may indulge in a pardonable degree of pride. Perhaps a little of the story of its beginnings may not be out of place.

There had been for a long time in the minds of some of those now members of the Society the conviction that there existed a pressing need for the arousing of interest in pediatrics in this city, for the concentration of the work which was being done, and for the stimulation of work which ought to be done in this branch of medicine. Yet everything seemed to be against the success of any scheme of forming a local association for the study of children's diseases. There existed, I believe, nowhere in the country an independent city pediatric society, and only one state society, that of Ohio. The Pediatric section of the N. Y. Academy of Medicine has become firmly established, but it was only a branch of the main body, and, as is well known, in that city there are an unusually large number of men having exceptional opportunities for the study of pediatrics, and exceptional ability also; together with sufficient active interest to make such an organization succeed. At the first nearly every one in our city who was approached upon the subject of having a pediatric society here had little but discouragement to offer. The thought arose that a pediatric section of the College of Physicians might be started, but an examination of the list of members of the college showed conclusively that there were not sufficient men in it actively enough interested in pediatrics to insure the success of the project. I spoke about the matter to one of the leading pediatrists of

Baltimore, and was assured by him that a pediatric society could not, he was certain, be established satisfactorily there, and that he did not think it could be in Philadelphia. With regret the whole project was therefore abandoned by those who had it in mind.

But it still remained fixed in the thoughts of some of those now among our members that the need for the society was urgent, not only for the reasons already given, but especially for the sake of awakening in the younger members of the profession an interest in the important subject of children's diseases—a matter which could not have been accomplished by a college section, even if such a section had not been impossible for the reason given. With many misgivings, therefore, it was decided to call a preliminary meeting of a few men, in order merely to talk the matter over. About fifty notices were sent out, and a number of persons spoken to, calling a meeting at the house of one of those interested for November 19, 1896. Although the time of the meeting was in the afternoon, when many men were naturally prevented from attending, to our surprise and pleasure between 30 and 40 were present, and many detained had written encouraging letters. A change had already come over the spirit of our physicians. Only enthusiasm was shown, and it was decided without a dissenting vote to issue a general invitation for a meeting for organization. This was done. The meeting was held on December 22, 1896, and was attended by between 125 and 150 physicians. The rest you know. Our constitution and by-laws were presented and adopted; our officers elected, and we settled down for work with an initial membership of 213. During the year this membership has grown constantly, 29 physicians have joined us, and 3 have resigned; making a present total membership of 239.

I cannot give exact statistics of the membership of other medical societies in Philadelphia, even if this were desirable, but I think I am safe in saying that the Pediatric Society is among the largest.

Now as to the work done. Your officers feared we should have difficulty in getting together enough scientific material for our meetings, and that a vast deal of drumming up would be required. The contrary, however, has been the case. We have generally had more papers offered than we could well accommodate.

Of the character of the work done by the Society I feel gratified in being able to utter little but praise. During the year there have been 46 papers read. A large number of these have been accompanied by the exhibition of cases, this making one of the most interesting features of our meetings. In all about 30 cases have been exhibited. . Some of the papers have been of especial interest, either on account of the labor which their preparation involved or of the importance of the subject or the rarity of the case exhibited. Without making any invidious distinction I may recall to your minds, as a few of many equally good papers upon congenital hereditary oedema, and upon angio neurotic oedema in children, both of them of great rarity, elaborate studies of glandular fever, and chemistry of colustrum milk, intussusception, the stigmata of degeneration in epilepsy, and enuresis, and a very practical paper upon antisepsis in the management of diseases of the skin in children. We have had one evening given up largely to the study of typhoid fever in infancy and childhood. At our first meeting we had the unusual opportunity of seeing two cretins presented and of receiving reports of ten others. We have also had reported during the year two cases of arsenical neuritis in children following the use of arsenic for chorea. Inasmuch as probably not more than 5 cases of this condition have been published during the last few years, the fact that two of them have been reported at our meetings is a matter of interest.

The discussions upon the papers contributed have, for the most part, been lively and interesting. There has scarcely been an article read or case reported which has not awakened some discussion. This is an important matter, since free discussion is both pleasing to the reader of the paper and generally instructive to the listeners.

With the attendance upon our meetings we have every reason to be gratified. The largest recorded attendance, except upon the night of organization, has been 73; the smallest 24, the average 50. The actual attendance has, however, been decidedly larger than this, owing to the presence of visitors, and especially owing to the fact that many members neglect the recording of their names a sthey enter the room. I would urge that this signing of the names be not neglected, as without it the Secretary can have no accurate record of those present.

Finally, as to our plans for the future and our prospects. We have already several papers promised for coming meetings. I am glad to be able to announce also that Prof. Osler has promised me to come to us early in the year and to read us a paper.

Everything in fact is pointing toward a long period of interesting useful work. The Philadelphia Pediatric Society is an assured success. It has passed long since the stage of experiment. Nevertheless there is reason to remember that we are still in the "new broom" stage; and that, while suffering ourselves to join in self-congratulation, as we have been doing, we must not presume too much upon our strength. A considerable number of our initial members are likely, in the natural course of things, to drop away from us. Others who attended frequently at first will cease to do so. There is always danger that the initial enthusiasm may wane. I would like to impress upon you, as I tried to do at the beginning of my presidency, that this is the individual society of each one of us. We owe to it the duty of our support, both in our scientific contributions and by our faithful attendance. Without both of these the organization cannot accomplish the good which is to be expected of it, and of which it has given such promise. Without a good audience good papers must not be looked for. Without intelligent discussion of papers there is no stimulus for members to present them. Without an abundance of interesting scientific material presented a good audience cannot be gathered together. I would like to see every member on the qui vive in his or her search for cases and contributions which may prove of interest. There is no necessity that the papers be long. In fact to have many such is not to be desired; and their length should be restricted by legislation by the Society. But our program has always had a distinct portion set apart for the presentation of cases with only verbal remarks, it may be; and for the brief, even verbal reports of cases, although they be not exhibited.

Again, this Society was not intended to be one in which only specialists take part. There should be continued, as in the year past, the freedom which every one of us, I hope, feels of joining in the scientific proceedings. This should be pre-eminently the society for the young practitioner, for it is upon the interest and enthusiasm of the younger members that its ultimate success will depend.

Neither has it been the policy of the Society to limit its proceedings to the study of medical pediatrics only, anything bearing upon the diseases of children in any branch—surgical, medical, or in the special departments has a place.

Of myself, I hope you will let me say that the evident success which you have made of this organization has made my term as its first president a great pleasure to me. To see it prosper has lain nearer to my heart than almost anything else during the past year. I feel sure that you know this, and that this has made you show me such uniform courtesy, and such tolerance of my presidential faults, of many of which I am well conscious.

Dr. E. E. GRAHAM exhibited an *abdominal tumor* in a child of three years. In the discussion Dr. F. A. PACKARD said:—"It seems to me that this tumor is rather too superficial and too much to the left side for a retroperitoneal tumor. There is also no swelling of the feet, although of course this sign is not necessarily present in that condition, as it depends upon the chief direction of growth. It seems to me on superficial examination that there are two notches to be quite plainly made out on the inner edge of this mass. Of course that does not absolutely prove its splenic origin; but to my mind it is a quite valuable sign in differential diagnosis."

Dr. ALFRED STENGEL.—In feeling this mass it struck me that the edge of the organ or tumor is very sharp and I felt almost tempted to think that it is the spleen on that account, at the same time the case that Dr. Hamill refers to, and one other case of a tumor involving the liver, were so deceptive in this very respect that I know that caution is very wise. The growth of modules on the surface of the organ in Dr. Hamill's case, and the similar growth of modules in other cases I have seen, was such that one could readily get the feeling of a sharp edge and a notch. The greater degree of frequency of sarcoma of the kidney as compared with sarcoma of the spleen of this size is a point which substantiates Dr. Graham's diagnosis of sarcoma of kidney in addition to points referred to in his clinical notes, the presence of blood in the urine is a point of some importance. While blood may occur in the urine in marked anaemic conditions, according to the blood examination made a week ago, this child is not very anaemic in the sense of having great reduction of the number of red corpuscles and it would be most unusual to find blood in urine from that alone. Of course there is another factor to be thought of; pressure upon the renal vein and escape of blood in consequence.

Dr. S. M. HAMILL.—Dr. Stengel's remark recalls a case of mine which he saw, and in which, as he has just said, he felt a distinct notch. From this and other reasons he concluded that the case was one of enlarged spleen. In fact there were a number of different diagnoses made in this case, but that of sarcoma of the kidney was never made. The case was thought to be, possibly, one of sarcoma of the retroperitoneal glands. This diagnosis was reached because it was thought that there were two masses, the one occupying the left lower quadrant and extending into the right lower quadrant, the other being in the upper left quadrant. Between these masses there was a broad area of tympany, and it was in this area that the very distinct notch was felt, which led to a diagnosis of enlargement of the spleen. The presence of this area of tympany and what seemed to be a very evident separation of the two masses led to the exclusion of sarcoma of the kidney. When the case came to autopsy it was found that the descending colon crossed the hilus of the kidney, extending from the umbilical region in the direction of the anterior superior spine of the ilium and this descending colon was what had given rise to the area of tympany, and led to all the errors of diagnosis. The kidney shape was perfectly retained.

Dr. E. E. GRAHAM.—I think the rapid growth of this tumor is an argument in favor of it being sarcoma of the kidney, and the fact that there is no history of syphilis would perhaps be somewhat against it being an enlarged spleen. The fact that the blood changes are not sufficient in themselves to give rise to the effect and the absence of corresponding enlargement of the liver are perhaps rather against this being splenic, yet after all these points have been gone over there remains always in the mind of every one a question whether or not it might be spleen. To my mind, however, everything points to the diagnosis of sarcoma of the kidney.

Dr. ALFRED STENGEL read a paper upon **Pseudoleukemia Infantum** and in the discussion Dr. ALFRED HAND, JR., said:—"Dr. Stengel has taught us a good deal about this subject in his paper, so that there is very little left for us to say. The point that he made about the case with which children reacted to the different causes of leukocytosis I think is borne out by many of the other clinical features of disease in children, not only in the outset of the symptoms of disease, but also in the frequently rapid recovery especially in those diseases which affect the blood. I remember one instance of gravel anemia in a child following intestinal hemorrhage. Two hemorrhages occurred, and the hemoglobin sank to 48 per cent., but within a few weeks the blood had returned almost to normal."

Dr. W. Reynolds Wilson.—I think it is interesting to note what might be called the want of balance in the blood of early life. I have been much interested in studying the blood of the newborn, which presents a characteristic excess of white cells. The excessive hemoglobin, the poikilocytosis, and the usual presence of great numbers of nucleated red cells are also very important differences from adult blood, and show probably a want of balance in the blood of early life which perhaps lasts over into the period in which this disease may develop.

Dr. Griffith asked Dr. Stengel to give his views on the subject of splenic anemia.

Dr. Stengel.—I do not think there is any definite disease, splenic anemia. I do not present this as a specimen of the blood of infantile pseudo-leukemia or even as corresponding to von Jaksch's description of that. I merely show it to illustrate the condition of the leukocytes in the leukocytosis of infancy. The differences between leukocytosis of infantile blood and the leukocytosis of adult blood is the thing which has impressed me, and given a case with marked anemia, splenic enlargement, and leukocytosis, I believe that the blood would take on characteristics von Jaksch has described.

In regard to splenic anemia I have not the slightest idea how to classify such a disease. I know many cases which have been described as splenic anemia have been secondary anemia, with enlargement of the spleen, some are syphilitic other Hodgkins' disease, but no one has proved that there is a definite disease splenic anemia.

Dr. W. Reynolds Wilson read a paper upon **Post Mortem Lesions Found in Two Instances of Death in the Newborn; One Due to Asphyxia, the Other to Malnutrition in a Premature Infant.**

Death from Asphyxia.—The infant of E. F. was born October 10, 1897, and died sub-partu, death being due to dystocia. The delivery was accomplished by means of the forceps. The necropsy revealed of minute ecchymotic areas distributed over the visceral pericardium, the base of the larger vessel, the pleurae, the mucous surface of the stomach and the duodenum.

The ecchymotic condition was the result of asphyxia and was due to the interruption in the circulation in the cord from the pressure. The condition of the heart showed an interruption in its action in systole. Death was therefore due to apoplectic asphyxia.

Death Due to Malnutrition in a Premature Infant.—The infant of M. G. was born October 1, 1897, and lived fourteen days. The post mortem examination showed bronchopneumonia with the distribution of the pneumonic patches at the base of each lung, together with areas of atelectasis. The infant had been carefully watched, so that the usually cited cause of such a condition, namely, the inspiration of foreign material, was not present. From careful study of the case it was evident that the weakly condition of the infant was responsible for the development of the pneumonia, the malnutrition being therefore primary and not secondary. The structure of the lung in the newborn also favored the development of the pneumonia, on account of the unsupported condition of the vessels in the interalveolar spaces.

Artificial Feeding of Infants.—ED. HENOCH, in the recent edition of his book, *Vorlesungen uber Kinderkrankheiten*, 1897, is credited by Senator for the following statements:

In the artificial feeding of infants, pure, fresh cow's milk is the best food, which should be sterilized by boiling (best in Soxhlet's apparatus), and be diluted according to the age of the child. All proprietary foods are condemned, and should only be used as temporary measures.

For spasm of the glottis Henock assumes a decided connection with rhachitis. Tetany, according to Henoch, has no connection either with spasm of the glottis or with rhachitis.

Gastro-enteritis in children is looked on by Henoch as an infectious disease produced by bacteria, whose form has not yet been determined, but which are probably the same that lie at the bottom of fermentation dyspepsias, the appearance of which may be favored by cold drafts as well as by foul air of dwellings. The entrance of bacteria and their toxines to the tissues and the blood give an explanation of the severe symptoms encountered.

In the treatment of diphtheria Henoch strongly advocates the employment of antitoxine, from the brilliant reports he has heard by other authors, he himself having only had experience of its value in a small number of cases.

Barlowe's disease is looked upon by Henoch as a form of hemorrhagic diathesis, similar to, but not identical, with scorbutus, having its cause probably in poor nutrition; its frequent complication with rhachitis speaks for this view. Henoch believes its connection with syphilis to be dubious.

ABSTRACTS.

A STUDY OF VALVO-VAGINITIS BLENORRHOICA IN LITTLE GIRLS.

D. A. B. Marfan writes in *Revue Mens. des Malad. de l'Enfance, 1897,* XV, *97:* Although cases of this affection have already been observed during the first days of life, it is usually found in girls from two to seven years of age.

After the author has discussed in detail the well-known symptoms of this disease, he observes that infection is as a rule caused by the gonococcus.

Infection may take place in three ways:

1—.From a man suffering with gonorrhea (it may be by rape or by sleeping in the same bed with a diseased father or brother.

2.—By infection with the pus of a blenorrhagic ophthalmia.

3.—By infection from a filthy bed, bath, toilet articles, sponges, and frequently from thermometers.

We must carefully distinguish cases in which blenorrhea is present, but no gonococci are found; these are.

1.—*Saprophytic vulvitis,* which is caused by saprophytes and bacilli coming from the feces, and which usually affects the inner and outer folds of the genital organs.

2.—*A simple purulent vulvitis,* caused by the microbes of suppuration; and

3.—The *aphthous vulvitis,* in which gonococci are also absent.

The disease is frequently complicated with symptoms produced by extension, by inoculation from one patient to another, and by a general infection.

By *extension,* blenorrhea of the rectum, catarrh of the bladder, the uterus, the tubes, ovarian affections, and peritonitis (a case of the latter having been observed by the author himself and described in detail), may be produced.

Blenorrhoic ophthalmia is usually caused by *inoculation.*

By *general infection* are caused, as a rule, inflammations of joints, especially of the knee-joint, but possibly also of the hand, foot, hip, etc. The inflammation is produced by direct action of the absorbed gonococci. More rarely are the pericardium, pleura, etc., involved. All these affections are found in young girls to a greater degree than is suspected. Therefore care should be employed and the external genitals frequently examined.

Treatment.—Permanganate of potash, in the strength of 1:1,000 (bathing and injections) is said to be a specific against the gonococcus. If this should not succeed, corrosive sublimate 1:10,000, or resorcin 1:100, or silver nitrate 1:3,000, may be employed. Should these not accomplish the purpose, bougies of iodoform should be inserted, at the same time applying an antiseptic ointment (Iodoform, 1:30; Ichthyol, 1:30; Hydrarg, ppt. rubr., 1:100, etc.) to the vulva. Complications must be treated individually. For the joint affections, which are usually accompanied by high fever, we may administer salicylic acid, salophen and antipyrin, *internally; externally* the joint should be immobilized and rubbed with an ointment of lanolin and lard āā 50 + oil of turpentine and salicylic acid āā 10. If absorption of the effusion does *not* take place, puncture must be resorted to. Should the joint again fill up, it should be opened, drained and washed out. During convalescence, massage, douches, sulphur baths may be ordered. In muscular atrophy, electricity.

TRACHEOTOMY AND INTUBATION IN MEASLES.

JOSIAS (*La Med. Mod., 1897, viii, 139*) says that since antitoxin is used in the treatment of diphtheria, intubation of the larynx has become the rule in children suffering with croup, in hospital as well as in private practice. In measles the physician may also have occasion to observe diphtheritic and non-diphtheritic, sudden, or gradual symptoms on part of the larynx, which usually occur in the beginning of the exanthem (laryngitis stridulosa, edema glottidis, diphtheria), and which may be so grave that immediate operative interference is imperative, if the children are to be saved from death due to progressive asphyxia.

No matter what may be the cause of obstruction of the glottis, treatment is the same. In these cases tracheotomy is always to be preferred to intubation, and intubation, which has given the most unfortunate results in Trousseau's Hospital, should be abandoned. NETTER reports that all the children intubated died with ulceration of the larynx, perilaryngeal abscesses, or most frequently with bronchopneumonia. He has returned to tracheotomy, in which he has seen one-half of the children operated on recover. Josias has had charge of the measle-pavilion in Trousseau's Hospital since January 1, 1897, and was obliged to tracheotomize five children in one and a half months. The first child, five years of age, admitted on the fifth day of measles, December 25, 1896, presented symptoms of asphyxia from edema of the glottis on the following day, and was tracheotomized; no pseudomembrane was present. Bacteriological examination revealed the presence of staphylococci and streptococci. The canula was removed on December 31 and the child left the hospital well on January 17.

The second child was tracheotomized for edema of the glottis on the fourth day of the disease, no membrane being observed, and was cured. The third child, two and a half years old, was tracheotomized on the ninth day of the disease, had no pseudomembrane, but short, rod shaped bacilli were found in the mucus, and the child was given an injection of 10 Ccm. antitoxin. It died eight days later, and on section presented numerous tubercular lesions in the lungs. The fourth child, four years old, was admitted on the twelfth day of disease, suffering with measles and diphtheria (angina and croup), and was tracheotomized; in this case pseudomembranes were removed. Antitoxin was twice injected, 10 Cbcm, at a dose, and the canula was removed on the fifth day. The child developed a general emphysema, but was cured. The fifth child, seven years old, developed croup on the fourth day of disease, was at once tracheotomized, and threw off pseudomembranes. It received 10 Ccm. of antitoxin, but died of erysipelas of the wound. Out of five tracheotomized children with measles, three were cured, and two died.

THE RAPID DIAGNOSIS OF LOEFFLER'S DIPHTHERIA BACILLUS.

FR. SCHANZ (*Berl. Klin. Wochensch., 1897, xxxiv, 48*) writes that with the general introduction of antitoxin, the want has naturally been felt more and more to diagnose true diphtheria as soon as possible, on the one hand, to be able to interfere in the very early stage; on the other, not to inject the patient unnecessarily with Lœffler's specific serum. Stations for examination were founded here and there, so that the preparations which were sent by the physician could at once be examined for the Lœffler bacillus, and the physician could within twenty-four hours, be in possession of the diagnosis. Is this, however, in the present state of our science, at all possible? This question is answered with no, by Schanz, pointing out the fact that there are other bacilli which are similar in appearance to Lœffler's, but which have nothing to do with diphtheria. According to Lœffler himself, there exists very frequently in the oral cavity such a saprophyte, which is very difficult to distinguish from the diphtheria bacillus which has become a virulent, and, as Frænkel has shown, can only be differentiated by its virulence from the latter. The examination for its poisonous qualities is, however, not possible in twenty-four hours, for which reason the postulate, to render an exact diagnosis within this time, must be looked upon as impossible.

IN HOW GREAT A DEGREE AND UNDER WHAT CONDITIONS IS THE PLACENTA PERVIOUS TO SYPHILITIC VIRUS?

ROSINSKY (Konigsberg) lays greater stress on the imperviousness of the placenta to the syphilitic virus than does Finger; only exceptionally, he says, does a post conceptional infection of the fetus or an infection of the mother happen by choc en retour (infection of the healthy mother by the fetus). Experimentally this question cannot be decided for syphilis, as animals are refractory to syphilis, and the conditions of glanders and tuberculosis cannot be compared to the same conditions in syphilis. We are thus confined to clinical observation. That infection can only take place when the placenta is diseased is certain; as a general rule, the placenta forms an obstruction which cannot be passed by the syphilitic virus, and this is premised in Colles' law. A mother who had given birth to a syphilitic child was confined with a second, seemingly healthy infant, which presented syphilitic symptoms, especially in the mouth, after seven weeks, and although the mother nursed the child she remained healthy. A portion at least of the cases which Fournier explains by choc en retour is to be explained as follows, namely, that the primary symptoms have been overlooked. Fournier then looks on immunity as identical with the presence of a latent syphilis in the mother. Finger has rightly put himself on record as opposed to this view. That this is not the case is demonstrated by the fact that wives who aborted or were always delivered of syphilitic children with a syphilitic husband, had healthy children after the husband had been cured, by energetic treatment, of his syphilis, or after contracting another marriage.

How should a woman be treated who has become pregnant from a syphilitic husband, and who was never primarily infected, and presents no symptom of syphilis?

The mother is in little danger, but the child in the greater number of cases is. A preventive cure would be the best thing for the child; but then we are compelled to give a healthy mother the course of treatment. After a second birth takes place we may more readily come to a conclusion, according to the course of the first. If the fetus has been infected in the first confinement, we are justified in administering antisyphilitic treatment to the healthy pregnant woman. In primiparæ the decision is beset with more difficulties; we must study each case by itself.

Lastly, the woman is to be considered as the nurse of her syphilitic child. Rosinsky cannot look upon nursing as being without danger, but if we wish to raise these children, who are not only endangered by the disease, but also by the treatment which they would have to undergo, mother's milk is the best diet. It may be that the milk of the mother who is immune contains antisyphilitic toxines which will benefit the child.

Hochsinger (Vienna) condensed his paper, in concluding, into the following six theses:

(1.) Healthy women who have been impregnated by syphilitic men may be confined with syphilitic children, but remain themselves free from syphilis during their whole life.

(2.) Women who become pregnant with ex patre syphilitic fetuses, but have themselves escaped infection by contact with the father of the child, receive, by virtue of their pregnancy with such fetuses, a certain though variable degree of immunity against syphilis which has been made the basis for the formulation of the so-called Colles law.

(3.) Colles' immunity of the mother is the result of the passage of immunizing substances from the spermatic infected fetus to the healthy mother, and is therefore not absolute.

(4.) Exceptions to Colles' rule apply to cases in which an insufficient amount of the immunizing substance—for reasons not always to be clearly recognized—has been incorporated during pregnancy, and therefore only prove the rule.

(5.) A retroinfection of the mother on the part of a spermatic infected fetus, the so-called choc en retour, no matter in what form it may be received, is clinically unsupported and cannot be substantiated, and is even theoretically difficult to demonstrate.

(6.) Finger's hypothesis of the toxic nature of the tertiary syphilis of the cryptogenetic tertiary stage of the mother cannot be reconciled with the basic factors of Colles' immunity nor with pathological and clinical symptoms of congenital early syphilis.

SCHLEICH'S INFILTRATION ANESTHESIA.

Dr. Karl Briegleb (*Der Kinderarzt, 1897, viii, 273*) finds that the employment of this adjuvant in surgical procedures on children is perfectly feasible. It stands to reason, however, that we must previously carefully estimate the amount of the solution employed, so as to determine the dose of cocaine and morphine which may be safely used. As a rule the weakest of the three solutions should be selected, and at times we may consider it safer to omit the morphine altogether, in extensive operations. Older children may frequently be induced to quietly submit to the injections, while younger ones may easily be firmly held. That the operation itself is painless can always be observed. A four-year-old girl, resting both hands on the back of a chair, quietly permitted the incision of an abscess of the back. Four resections of the ribs were made in children, one of whom was eight months, and another one year of age. Both patients, however, were seized with violent vomiting after the operation, which was attributed to the small doses of morphine in the injections. (Solution No. 3 contains 0.0001 of cocaine and 0.00005 of morphine in a hypodermic syringeful; about 20 syringefuls are needed in a resection of the ribs.)

Tracheotomy might also be performed in older and tractable children under Schleich's infiltration anesthesia. In one case the child was subdued by a few whiffs of chloroform and Schleich's method employed.

COMPLICATIONS OF VULVO-VAGINITIS IN LITTLE GIRLS.

Marfan (*Abeille med., 1897, 16*) speaks of three kinds of complications, which are to be distinguished:

(1.) *Such as are caused by extension of the process:* Bartholinitis, vulvitis phlegmonosa, blennorrhagia anorectalis. The infection may frequently involve the urethra, but rarely extends further, causing a burning pain and occasionally prolapse of the urethra, which is liable to cause hemorrhage that may be mistaken for metrorrhagia. Metritis, salpingitis, oophoritis and peritonitis are met with; the latter may run a lethal course, or take on a chronic adhesive character.

(2.) *Complications in distant organs:* Ophthalmia.

(3.) *Complications due to general infection:* Rheumatism may appear on the ninth day, be monarticular, and if so, usually attacking the knee-joint. Frequently the capsule of the tendons are involved along with the joint, or the latter may alone be affected. The disease occasionally causes death in the new-born. Its average duration is two weeks. It is well known that endocarditis and pleuritis gonorrhoica may also occur. Gonorrhea is so frequent a disease that it should always be remembered as a probable cause in rheumatism of children. The most efficient remedy seems to be potassium permanganatum, in the form of lotion or douches, of a solution of the strength of 1:1000, which are to be continued for a number of days after the cessation of the discharge. Should this treatment be insufficient, a solution of corrosive sublimate (1:10000), or resorcin (1:100), or nitrate of silver (1:3000) should be employed, or else pencils containing iodoform may be inserted into the vagina, and an ointment of iodoform (1.0:30.0), ichthyol (1.0:30.0), red precipitate (1.0:100.0), rubbed on the vulva. In the treatment of rheumatism, salicylic acid, salophen, antipyrin, may be given in proper doses; it is also recommended to immobilize the limb or to apply an ointment of salicylic acid. Where the tumefaction is marked, puncture may have to be resorted to; when pus is present, an incision and drainage are indicated. Later, douches, massage, sulphur-baths and electricity are indicated.

THE TREATMENT OF VULVO-VAGINITIS IN LITTLE GIRLS.

Dr. K. WITTHAUER (*Centralbl. f. Kinderheilk., 1897, ii, 397*) finds that vulvo-vaginitis is not so rarely met with in little girls as is usually supposed. The reason of this is probably to be found in the fact that the parents as well as the children try to keep this disease a secret, from a false feeling of modesty.

The *causes* of this form of suppuration are various. Filth, masturbation, the migration of oxyures into the vagina may, as is well known, cause a vaginal catarrh; the most frequent etiological factor, however, is without doubt gonorrhea, and the presence of gonococci has been frequently and with certainty demonstrated by microscopical examination and the making of cultures. Not that the germs of infection are frequently directly carried over by rape, but the existence of a gonorrhea in the father or mother may easily infect the child, through the use of the lavatory, towels, the same bath, the bed, by direct contact, etc.

The symptoms are well known. The most prominent is the puriform discharge. Examination reveals redness and swelling of the vulva and of the vagina, as a rule accompanied by a more or less extensve eczema of the surrounding parts. The vagina, perhaps also the urethra, discharges a thick creamy pus. The child complains of a burning sensation when passing urine, pain on walking and on sitting, and of violent itching. With these symptoms the general health is usually affected—headache, loss of appetite and depressed spirits make their appearance.

To arrive at the diagnosis between a gonorrheal or catarrhal vaginitis a microscopical examination is indicated, although, according to the writer's view, there is not much difference in the treatment.

Treatment has been undertaken with the most diverse remedies. Usually it consisted in the cleansing of the outer genital region and irrigations of the vagina with disinfectants by means of small hand syringes. For this purpose corrosive sublimate, chloride of zinc, permanganate of potash, alum, sulphate of zinc, nitrate of silver and other drugs are recommended; iodoform in solution and in the form of suppositories has been employed. Other authors condemn these radical measures, and content themselves with ordering sitz-baths and general cleanliness, and have been able to cure their patients after a time.

There is no doubt that frequent local applications, especially the introduction of irrigation tubes, into the vagina of children are attended by some drawbacks, and the author therefore advocates an intermediate line of treatment. He employs suppositories 6 cm. in length, containing 3% of alumnol, and introduces these into the vagina after careful cleansing of the parts. On the following two days warm sitz-baths are administered mornings and evenings, and the genitals are thoroughly cleansed. In three children who were treated in this manner, the introduction of the vaginal pencils was only necessary four or five times, after which the discharge permanently ceased. In two of these children Witthauer was convinced that the discharge was of a gonorrhoic nature, as both parents of the child had been under his care for that disease.

REMOVAL OF A RETRO-BULBAR TUMOR WITH PRESERVATION OF THE EYE.

Dr. Weiss (*Die Therapie der Gegenwart, 1897, iii, 736*) describes the following case: The parents of a one-year-old child noticed, soon after birth, the enlargement of one eye. The latter did not protrude anteriorly, but towards the nasal side. Weiss operated according to Kroenlein's method, making first a semicircular incision into the skin above the external margin of the orbit, which was resected, turning it out laterally. A transparent bluish cyst now presented. During the attempt to enucleate the wall of the former the cyst ruptured, and it was seen that it continued deeply into the orbit in the form of a tube. The operation had then to be discontinued on account of the profuse hemorrhage, but after two days was again resumed. The remnant of the cyst which extended into the foramen opticum was enucleated and cut off, but Weiss did not know whether it had all been removed.

The wall of the orbit was then replaced and the wound closed. Healing took place without any accident. The exophthalmos remained cured. Examination by the ophthalmoscope revealed a pale papilla.

A CASE OF MELENA NEONATORUM WITH A FAVORABLE ISSUE.

P. Dmitriewski (*Die Therapie der Gegenwart, 1897, iii, 727*) reports this case: The child was born without any morbid symptoms whatever, remained perfectly healthy during the first three days of life, was nursed by a healthy, robust wet-nurse, and took kindly to the breast. On the fourth day the mother noticed that the child's passages were black. On the fifth day the movements also contained clotted and fluid blood. Vomiting of blood occurred, and the child refused the breast. Dmitriewski was called to the child on the same day for the first time, but was unable to discover any pathological process either in the lungs, the heart, or in any other organ. The mucous membrane of the mouth was of normal color, as was also that of the pharynx; the umbilical cord had not yet fallen off; navel normal. Dmitriewski ordered the extremities to be enveloped in flannels, and administered internally one drop of the liquor ferri sesquichloride every two hours. On the sixth day the bloody stools recurred, the child lay in an apathetic condition, the rectal temperature was 36.3, the pulse 138, respiration 30. Dmitriewski then added to his former medication aqueous extract of ergot 0.4, a teaspoonful every two hours. On the seventh day the umbilical cord dropped off, the umbilical wound looked healthy, the stools were still bloody, but vomiting had ceased. On the eighth day no more blood was seen in the stools. The child improved and recovered perfectly. Dmitriewski believes that this case of melena might have been due to a severe hyperemia of the gastro-intestinal tract as a result of the tying of the navel.

INFLUENZA OF CHILDREN.

L. Furst, Berlin (*Die Therapie der Gegenwart, 1897, iii, 717*) says that a child suffering with catarrh of the upper air-passages should be isolated; even though no fever is present it should be put to bed and carefully watched. When necessary, a slight laxative should be administered. The diet should be confined to milk, light gruels, etc. The pharyngitis should be treated for the hyperemic swelling, the secretion and the difficulty in swallowing. Injections, douches, irrigations or forced inhalations and insufflations have no place in Fürst's treatment, as all these manipulations tend to increase the turgescence and irritation, and may force the cocci into the accessory cavities or into the eustachian tubes. He has found of value the local application of the vapor of turpentine or of a one to two per cent. solution of menthol in alcohol. These medicaments are to be vaporized and the fumes forced into the nasal cavities under very slight pressure, by means of a hand spray having two rubber bulbs used in the opposite manner to that followed in using liquid sprays; that is, the glass-tube which reaches to the bottom of the liquid contained in the bottle is connected with the two rubber bulbs, while that passing only through the cork (therefore above the fluid) is connected with the nasal orifices. When we now make pressure on the bulb, the vapor only is forced against the diseased mucous membrane. Fürst has been much pleased with this simple recommendation of Saenger. Ol. menthol, ol. eucalyptus and cocaine mixed in various proportions with menthol has been employed for similar purposes. These *olfactoria* not only act as sedatives, but at the same time as astringents to the vessels, and also as disinfectants. They are indeed capable when brought in contact with the diseased mucous membranes in the right manner, e. g., in the form of vapor, under slight pressure, to relieve their catarrhal condition, and even shorten their duration. For this reason the formula proposed by Kafemann also gives good results:

Menthol	4.0
Eucalyptol pur alb	2.5
Ol. terebinth. rectif	5.0
Ol. pini pumil	1.0

M. S.—Two to four drops, to be inhaled from a V-shaped nose-glass, previously warmed.

For the pharyngeal catarrh Fürst employs gargles of boric acid and common salt; for catarrh of the larynx, the same vaporized as an inhalation; for bronchial catarrh, the usual expectorants. Symptoms of otitis (pain, restlessness, etc.) should be at once subjected to special treatment. He treats febrile catarrhs with hypdropathic packs to the throat and chest; gastric irritation with symptomatic medication; albuminuria with a milk diet, tea containing lemon juice, etc. Whether we may dispense with internal medication in the influenza of children has not yet been settled by the various authors. Fürst has only met with favorable results when he subjected every suspicious catarrh accompanied by slight febrile movement, headache or other initial symptoms of influenza, to the proper internal treatment. He believes that he frequently even succeeded in aborting the disease. At first he used quinine, according to Roussy, Mosse, Samson and others. In the nervous form, following Drews, Claus, Hennig, he employed salophen. In individual cases he prescribed Natr. salicyl., phenacetin and lactophenin. Nothing has, however, given such continuous relief, reliable, prompt and free from unpleasant after-effects, as salipyrine, especially in the febrile catarrhal prodromal and initial stage of influenza in children. Fürst ascribes, together with v. Mosengeil, Békers, Moncorvo, A. Hennig and many others, a nearly specific effect to this drug. The doses recommended are as follows:

Young children (up to 5 years of age), 0.25 pro dosi.
Older children (5 to 10 years), 0.5 pro dosi.
Grown-up children (10 to 14 years), 1.0 pro dosi.
S.—Three times a day in some slightly diaphoretic tea.

After two days we may, as a rule, reduce the time of administration to twice daily, which should be continued for three to four days after beginning convalescence, the children being kept in bed. In the after treatment, stress is to be laid on the gradual hardening of the constitution to guard against a relapse. Fürst orders the sponging of the children's chest and back mornings and evenings with water (18-20°) containing a tablespoonful of French brandy and one of common salt to the liter. The mucous membrane of nose, mouth and pharynx is cleansed three times daily with a cool solution of boric acid and salt, and the children are enjoined to wear woolen underwear and warm, heavy shoes.

FUNCTIONAL DISTURBANCE OF MICTURITION IN CHILDREN.

Kutner (*Aerztliche Rundschau, 1897, vii, 791*) presented two children to the Berlin Medical Society: one a girl, eight years old; the other a boy. The girl had suffered from incontinence since birth—not that the urine continually dribbled away, but after one or two hours or longer it would discharge spontaneously, without her knowledge. In consequence the child was continually wet. The affection had been diagnosed by various physicians as weakness or paresis of the bladder. Kutner was at first inclined to this view, until two circumstances led to the right diagnosis. In the first place, the region of the bladder was somewhat prominent, and, secondly, in his attempt to determine the capacity of the bladder he discovered residual urine. This unexpected discovery raised the suspicion that he had to deal not with a paresis of the bladder, but with a contracture of its sphincter. As a matter of fact, on further observation residual urine was always found present. The explanation of the symptoms was now easy. There existed an antagonism between the elasticity of the wall of the bladder and the contraction of the sphincter: so long as the latter was in the ascendent the urine was retained; when after gradual filling of the bladder, the former preponderated, evacuation was the result. Treatment consisted in dilatation of the sphincter and in the advice —for strengthening the wall of the bladder—to urinate every three hours, which at first could only be accomplished by the exertion of great pressure. After four weeks of this treatment the child was cured. The other patient, a boy, complained of intense desire to urinate, pain on micturition and obstruction to the flow. When quite young he had several times suffered from complete retention—at the age of six months an attack lasting 13 hours; from two and a half years of age during the following six years repeated retention occurred, continuing from 16-24 hours, and at one time even lasting 52 hours. Finally he was only able, when held by some one, to pass his urine with great pain drop by drop; nevertheless, it would spontaneously dribble away at night. In this case also there was present a marked convexity in the region of the bladder. On passing a sound through the urethra a contracture was found 10 ccm. behind the external orifice which allowed the passage of a No. 8 Charrière only. Kutner suspected a congenital stricture, but as dilatation, which would not have been possible in organic stricture, was successful, this seems also to have been due to a spasm of the sphincter; it has not returned at present, after an interval of two months.

PSEUDO HYPERTROPHIC PARALYSIS.

P. O. Truscott (*Med. Review, Jan. 22, 1898*) reports a case of typical pseudo hypertrophic paralysis in a boy 7 years old. The child fell on turning suddenly, and fractured his femur. At the time of the accident it developed that he was not as active as some children, and, although recovery was perfect, he did not walk as well as he seemingly should. The condition could not be accounted for until some months later his father gave a clear account of some of the leading symptoms of pseudo hypertrophic paralysis. On careful examination, functional weakness of the muscles, enlarged hard calves, straddling gait, difficulty in walking upstairs, oscillation of the body from side to side in walking, lordosis, the tendency to talipes equinus, and the disposition to use the hands in "climbing the thighs" in arising from a sitting position, gave a clear picture of pseudo hypertrophy. The initial symptoms, due to muscular paresis, are so slight that they are apt to be overlooked for some time, during which the disease makes considerable progress. Possibly in this case the fracture of the femur occurring during the initial stage of the disease may have been a predisposing cause. The course was typical, the hardness of the calves giving way to a lesser consistency and the paresis increasing. The erector muscles of the spine and the muscles of the chest, shoulders and arms became atrophied and paretic. He was able to walk to a slight extent until he had pneumonia, from which, in spite of the lowered vitality, he recovered. Paresis, atrophy and deformity increased, but the forearm muscles remained intact. The mental condition was unaffected, and vegetative functions were well performed. There was no arrest in the growth of the bones, or in the general development of the limbs. The true pathology is a mooted question. Hammond regards the primary lesion as central, and the muscular changes as secondary, while Jacobi thinks the primary lesion is connective tissue hypertrophy with secondary atrophy with adipose deposition. The striking clinical features are: (1) Its great preponderance in males, 87 per cent. of recorded cases. (2) Its occurrence mainly in infancy and early childhood, 2-3 of cases under 6 years. (3) Its peculiar hereditary character. In boys the prognosis is more unfavorable than in girls. The hereditary transmission is through the female, but the disease affects the males, as is the case with hemophilia. It is an instance of atavism. Of the exciting causes nothing is known. Treatment is usually negative.

ABSORPTION OF FOREIGN SUBSTANCES BY THE FAUCIAL TONSIL.

L. L. Goodale gives an account of a series of experiments undertaken by him to determine whether or not infectious substances might be absorbed by the tonsils (*Jour. of Eye, Ear and Throat Diseases, Jan. 1898*). Foreign substances were introduced into the crypts of more or less hypertrophied human tonsils which were subsequently removed. The substance (carmine) was introduced into the crypts for the reason that if absorption occurs at all, it would be more apt to be from through the delicate loose lining of the crypts than through the compact mucous membrane of the free surface of the tonsil. After excision, the tonsils were hardened in corrosive sublimate, embedded in paraffine, cut in series, and stained with hematoxylin and aurantia. The carmine was introduced in water solution through a blunt pliable silver canula. Twelve cases were examined: 2 immediately after injection; 1 after 20 minutes; 1 after 45 minutes; 2 cases after 1 hour; 1 after an hour and a half; 1 after 2 hours; 1 after 2 days; 2 after 5 days; 1 after 10 days. The two cases in which immediate excision was done showed no trace of carmine in the mucous membrane, and served as control cases. After twenty minutes, particles of carmine were found in lines extending from the crypts into the mucous membrane. The carmine lay directly contiguous to the leucocytes. In the other cases, extending the time to two hours, similar conditions occurred, the depth of penetration varying with the time intervening and the looseness of the structure. The distribution of carmine after penetration of the mucous membrane was between the follicles. Many polynuclear neutrophiles contained carmine particles. After five days the intercellular spaces on either side of the crypts were filled with carmine in linear arrangement. In the carmine infiltrated areas, leucocytes were more abundant than elsewhere; many were filled with carmine, and many showed fragmentation of nuclei. Polynuclear neutrophiles were abundant in crypts and nuclear fragmentation was very marked. In the tonsils excised five and ten days after injection, similar conditions were found. The carmine was most abundant midway between the follicles, In sections stained for bacteria, careful search failed to show these and in no case was carmine found in the interior of the follicles.

organisms in the tonsillar tissue, except in the most superficial portion of the epithelium of the crypts. In one case, a carmine suspension in which a characteristic bacillus had developed was introduced into the crypts of a moderately hypertrophied tonsil, which was excised after two days. Although carmine particles were found in the interfollicular lymph spaces, no bacilli were discoverable below the superficial epithelium of the crypts.

The author concludes: (1) Absorption exists normally in the tonsil and takes place from the crypts. (2) The path of the absorbed substance in the interfollicular lymph spaces in the direction of the larger fibrous trabecular. (3) During the process of absorption, substances encounter phagocytic action on the part of polynuclear neutrophiles situated in and adjoining the mucous membrane. (4) Bacteria are normally present in the crypts, but are not ordinarily demonstrable in the tonsillar tissue. In view of these facts it seems possible that bacteria are continually making their way into the tissue, but at the moment of entering meet their destruction. Further, it is suggested that the inflammation of the tonsils may be due to absorption of irritant substances produced by the bacteria in crypts.

NON-OPERATIVE CASES IN ORTHOPEDIC SURGERY.

G. G. Davis writes, in the *Philadelphia Medical Journal*, on non-operative cases in orthopedic surgery. I. Infantile Clubfoot: This condition can be cured without operation in practically all cases in infants who can be under treatment from birth. The infant being held in the mother's lap, the latter should grasp the leg close to the ankle with the left hand. The right hand grasps the foot, thumb on dorsum, fingers on sole, and rotates or twists it outward until it is in a straight line with the leg; it is then flexed toward the leg to stretch the tendo Achilles. This should be strongly done, but not so roughly as to break the bones. This stretching should be done several times a day. After a few weeks a flannel bandage and splint holding the foot in as nearly correct position as possible may be applied. The bandage should be carried across the sole from the inside to the outside of the foot. In older infants a plaster bandage may be necessary, and should be changed every week until the foot can be brought nearly straight and be treated with a splint. II. A case of Spastic Paraplegia, in a child of four years, is also reported: The child has walked on its toes from the age of 2½ years, but often stumbles. The disease is of cerebral origin. A pair of braces was constructed, to be worn outside the shoes, permitting flexion but not extension of the foot. The device consisting of a prolongation of the side-iron down beyond the ankle joint and limitation of extension by a screw inserted in the stirrup is serviceable in cases of paralysis of the leg muscles in infantile palsy. III. Rachitic Curvature of the Spine: Spinal curvature occurring before two years of age is more apt to be rachitic than carious. When the child is held up by the arms, the back is straight, but as soon as it is placed in a sitting position the shoulders fall and the back curves. There is no lump, but the curve involves both dorsal and lumbar regions. Other symptoms of rickets are usually present. In treatment simplicity should prevail. General nutrition is most important. A supporting apparatus consisting of a piece of sole leather covering the back and reaching from neck to pelvis, with two steel bands riveted to it, and fastened by three straps of webbing on each side and two over the shoulders to an apron across the front of the chest and abdomen, will afford a certain amount of comfort. IV. Pott's Disease: In the active stage, the child should be, when possible, kept on its back with head extension. After several months, when the disease becomes stationary, a brace is applied, and the patient allowed to get up. The form of the brace, of course, varies with the conditions to be met. V. Lateral Curvature: In treating this condition as it usually occurs in adolescents, exercises are our main reliance, but in far advanced cases, some support is necessary. A brace is constructed as follows: The usual waist-band is used, to which are attached three uprights—one in the middle of the back and one under each arm. That under the arm of the high side passes up in front of the shoulder, over which a strap passes, connecting the side upright to the top of the back upright. A wide band of webbing fastened to the side and back uprights passes under the arm and over the projecting side of the chest. When the straps fastening this are tightened, the shoulder is drawn back and pressure made on the hump. On the opposite side the upright bears a simple crutch, the posterior end of which is fastened to the upright. VI. A Simple Splint for Coxalgia: A round steel rod was bent and curved to follow the contour of the body and affected limb. Beginning below the anterior superior spine of the sound side, it passed across the back of the pelvis to the opposite side, then along the outer side of the affected limb, beneath the sole of the foot, up the inner side of the limb in the perineum, and then along the gluteo femoral fold to the outer side, where it was fastened. The half-ring so formed was padded, and formed a support for the buttock of that side. A strap passed across the front of the pelvis, joining the upper end to the outer side of the splint. A leather band encircled the limb at the knee, and two buckles, fastened on each side of the splint where it passed under the sole, gave attachment to the adhesive-plaster extension which was applied to the limb from the ankles to above the knee. The splint, if properly proportioned as to length, is fairly efficient and is most easily made.

CONGENITAL DEFECT OF THE CHEST WALL.

G. A. SUTHERLAND (*Clin. Journal, Jan. 5, 1898*) presented before the Northwest London Clinical Society on November 17, 1897, the case of a boy eleven years old, who presented a congenital deficiency of the chest wall on the right side. The pectoral muscles were entirely absent from an area extending from the second to the fifth rib, and from the costal cartilages to the anterior axillary border; the ribs were atrophied and the intercostal muscles wasted. On coughing, there was protrusion of the lung through the third and fourth intercostal spaces. The deltoid and scapular muscles of the same side appeared to be hypertrophied, probably compensatory for the absent pectorals. The chest was markedly flattened, and the circumference of the right side was much less than that of the left. There were no associated lesions, and the use of the arm was apparently not interfered with. The exact nature of the lesion is obscure, but the consensus of opinion is that it is due to local pressure during intrauterine life, either from another child in the case of multiple pregnancy (a possibility in this case), or from some part of a limb or from extrauterine structures. In the subsequent discussion other similar cases were mentioned. Dr. Guthrie suggested that if the lesion was due to pressure, the arm through which it must have been transmitted would have suffered equally with the chest. He regarded all such deformities as developmental imperfections.

ANOTHER METHOD OF ARTIFICIAL RESPIRATION FOR THE ASPHYXIATED NEW-BORN.

HOGNER (*Times and Register, Jan. 29, 1898*) recommends the following method as being effective, easy of application for the operator, and not unpleasant for the parents and friends to witness. The operator seats himself on a high chair, has a tub of luke-warm water on the floor at the right, with vessels of hot and cold water in easy reach. He holds his knees together, somewhat bent at the knees, and on an inclined plane. If right-handed, he lays his left hand palm up, so that the wrist is between his knees. The child is laid on its back, with its head supported by the extended left fingers. Its body must be so inclined that fluids can run out through the nostrils, and its arms should be outstretched and hang downward and backward to hold the pectorals in the greatest tension, thus bringing the thorax into the position of inspiration. The operator places his right hand, with extended fingers, on the child's chest and abdomen, the tip of the middle finger resting on the throat, the index and ring fingers on the subclavicular spaces, and the thumb and little finger in the armpits. By pressing with the right hand, expiration is induced, followed immediately on removal of the pressure by an automatic inspiratory movement, caused solely by the above described position of the child. The alternate pressure and non-pressure of the right hand leads to an artificial respiration of any required depth and rapidity. The frothy substance escaping from the child's nose can be removed by an assistant or by the operator, or can be left to itself, as the child's position prevents it being drawn into the windpipe. Between the respiratory movements, the heart may be stimulated by delicate percussion on the precardial region in the rhythm of the heart-beat made by the right middle and ring fingers without otherwise changing the position of the hand. At intervals the child is placed in an upright position to empty bronchi which may not have drained in the downward position, and to relieve the auricles of the heart. If deemed advisable, the child is dipped into the warm water, then into hot, and the chest sprinkled with cold water. Subcutaneous injections of physiological salt solution from a few drops to ½ cc. at a time may be used to stimulate the heart; alcohol, ether, oil of camphor and nitroglycerine have also been recommended.

PURULENT OSTEOMYELITIS FROM PNEUMOCOCCUS INFECTION.

F. PERUTZ (*Munch. Med. Wochenschr., Jan. 18, 1898*) reports a case of osteomyelitis in an eleven-months-old child. The child had first a catarrhal pneumonia of the upper left lobe, which ran its course in ten days. The next month there was a recurrence, with high fever, lasting a few days. Next symptoms affecting the left arm occurred, loss of function and pain on motion being present, followed by swelling and redness. The left shoulder joint was chiefly affected. Edema of the skin extended to the hand. On incision, a quantity of yellow-brown pus was liberated. The head of the humerus, being involved to a great extent, was removed, as was also a piece of the diaphesis 1.8 cm. long. The cavity was tamponed with iodoform gauze, was drained and closed. Microscopic examination of the pus showed large numbers of Fränkel's pneumococcus. The child made good recovery. Infection probably took place through the blood, involving the bone marrow, from which the suppuration extended to the cartilaginous border. Most of the cases heretofore reported have been properly classed as ostitis and periostitis, but Lexer reported one in which the marrow was involved.

CHLORIDE OF ZINC INJECTIONS IN HERNIA.

The first child shown by Prof. LANNELOUGUE (*Ther. Wochenschr., 1897, iv, 481*) presented a rather large hernia with a wide inguinal canal. The boy is 14½ years old, and always was perfectly healthy with the exception of an attack of measles when seven years of age. The family history does not disclose any other cases of hernia, nor is there the slightest suspicion of rhachitis, syphilis or tuberculosis. The boy is strong, muscular and healthy in all respects except that the first symptoms of epilepsy are beginning to appear. The hernia has existed two years, developing without any known cause, and descended to the bottom of the scrotum in the first few days after its appearance. On examination a soft tumor the size of a hen's egg was found in the right half of the scrotum, continuing into the inguinal canal. It was nearly in contact with the testicle, and was plainly independent of the latter; was easily replaced, giving rise at the same time to distinct gurgling. The inguinal canal was so large that the finger could be passed into it with ease after reduction of the hernia. When the patient coughs, the finger is repelled, and when withdrawn, the hernia follows. There is no doubt, therefore, about the diagnosis in this case. We are dealing with a congenital right-sided funicular inguinal hernia, containing intestine, which is remarkable on account of its size and the dilataton of the inguinal canal. The size of the tumor is particularly emphasized, as we rarely meet with hernias in children which exceed the size of a hen's egg. At this age a hernia is usually small. In this case, however, we have before us a large hernia with a wide canal and great expansion of the inguinal ring. This form of hernia is difficult to cure.

The following is the method of operation: The child is anesthetized by chloroform, the inguinal space scrubbed with soap and corrosive sublimate, and surrounded with aseptic compresses. Lannelougue uses for injection a ten per cent. solution of chloride of zinc; the instrument needed is simply a Pravaz syringe. The hernia being situated on the right side in this case, Lannelougue stands on the right side of the patient and his assistant on the left. The duty of the latter is to firmly press his finger on the abdominal wall in the vicinity of the abdominal ring, to prevent any communication between the hernial sac and the abdominal peritoneum. Lannelougue now palpates the inguinal ring and the upper edge of the os pubis between the spine and the symphysis with his left index finger to locate the spermatic cord, which, as we know, has a superficial position. The vas deferens in children is easily found, in spite of the well developed panniculus adiposus, as are also the accompanying parts of the spermatic cord. Lannelougue now laps the pulp of the left index finger on these and by means of a firm push drives them towards the median line, so that the spermatic cord is held out of harm's way. The first injection is now made on the right of the cord, pushing the needle in an oblique direction downward and a little backward into the periosteum of the upper border of the pubic bone. Five or six drops of the chloride of zinc solution are then deposited on the bone, and the needle rapidly withdrawn, after which the assistant dries the capillary opening with some cotton. A second injection is made below the first puncture, but always to the right and by the side of the spermatic cord; a third and then a fourth are made, each consisting of five or six drops. Now Lannelougue proceeds to the left side of the patient, the assistant in the meantime, without stirring, still pressing his index finger on the abdominal ring. Lannelougue now pushes the spermatic cord to the right with his index finger, and proceeds to make four injections to the left of the cord at the upper margin and the anterior surface of the pubic bone, each one consisting of about five or six drops. Following this a compress tampon is applied in the vicinity of the abdominal ring, held in place by a bandage, and the patient is awakened. The duration of the whole operation is usually two minutes. Altogether, fifty drops of a ten per cent. solution of chloride of zinc are used.

This is the whole technique of the operation, which is very simple, can be performed by every one, and only demands cleanliness. The question may arise whether this procedure is wholly without danger, and if there be no risk of the solution entering the abdominal cavity, or of the spermatic cord being injured. The passing of fluid into the abdominal cavity is excluded for the reason that during the whole operation and for some hours afterwards all communication with that cavity is cut off by the pressure of the assistant's finger and later by the compress. Besides this, no bad results would follow the passage of the fluid into the abdominal cavity. Experiments conducted by Lannelougue in his laboratory have shown that this injection when practiced on the parietal peritoneum is absolutely without danger. The danger of wounding the spermatic cord is obviated by isolating it, which is easily done as described above, but even should it be punctured Lannelougue is convinced that no harm would come either to the veins nor to the vas deferens.

Lannelougue then presented two patients on whom he had operated in the above manner on June 22, 1896. The inguinal canals were occluded, the finger could not be passed into them, and coughing did not give the sensation of an impulse to the finger. The spermatic cord and testicles were intact.

AURAL NOISES.

Hopmann (*Munch. Med. Wochenschr., Jan. 18, 1898*) reported at the meeting of the West German Laryngologists and Aurists the case of a three-year-old girl who was brought to him on account of a loud rhythmic murmur in the left ear. The noise was said to have been a sequel of severe whooping cough. The noise was distinctly audible at a distance of 10 cm. from the ear, or at night at a greater distance. With the stethoscope it was heard as a loud blowing sound synchronous with the systole of the heart, and was not heard over the heart, the other ear or the great vessels. The only means of stopping it was by firm tamponade of the auditory canal. These murmurs, which it has been in part assumed, in part proved, to be due to aneurism of the posterior auricular artery, are to be contrasted with the irregular snapping piping murmurs which are due to a clonic spasm of the muscles. The latter is partly under control of the will, and ceases during sleep.

PRACTICAL NOTES.

To Administer Cod-liver Oil to Children.—E. OWEN is a great believer in cod-liver oil for ill-nourished children, and is always disappointed when he finds that a child cannot take it. He has observed, however, that it agrees perfectly well with many when they do not know what they are taking. Most children like sardines, which Dr. Owen considers the only tinned food for them. He finds that by substituting cod-liver oil for the original cotton-seed oil, in which the fish are packed, the former is readily taken and digested.—(*Lancet, Jan. 29, 1898.*)

Ointment for Infantile Eczema.—W. P. KISTLER recommends the following:

℞	Salicylic acid	2	parts
	Bismuth subnitrate	40	"
	Cornstarch	15	"
	Ointment of rosewater	100	"

The ointment is to be spread thickly on pieces of muslin and applied carefully in the moist variety. In the dry squamous form it may be rubbed over the skin.—(*Med. Rec., Feb. 12, 1898.*)

Ichthyol in Conjunctivitis.—

℞	Ichthyol	50	gme.
	Distilled water	50	"

Or a more dilute solution:

Ichthyol	30	gme.
Distilled water	70	"

Apply to conjunctiva with a brush, and perform slight massage with the pulp of the little finger for a few moments. —(*Zacovidès.*)

Intubation for the Removal of Foreign Bodies from the Trachea.—Two cases have been reported—one by BOKAI at the Medical Congress at Moscow, and the other by LEVESTRE at the meeting of the Society of the Hospitals of Paris, held October 29, 1897, in which intubation was done with the hope of removing a foreign body from the trachea. The latter case was that of a child five years old who had swallowed a glass bead. Attacks of suffocation with coughing came on; bloody expectoration also was present. During the attacks at the end of expiration, a distinct sound due to the shock of a foreign body could be heard. The child was admitted to the hospital one month after the accident. A large tube was passed, and during the fit of coughing resulting a large fragment of the bead was expelled, followed by mucus containing black powder, the detritus of the bead. The conditions necessary for the success of the operation are moderate size and mobility of the foreign body. The method deserves trial in similar cases.—(*Lancet*, *Dec. 11*, *1897.*)

Congenital Osteosarcoma of the Clavicle.—COURTIN observed this disease in a well-developed female child. The parents were healthy, but an aunt had died of carcinoma of the breast, and the grandmother on the mother's side of carcinoma of the uterus. The region of the left clavicle was prominent, showed dilated veins, and the skin was hot. The tumor had encroached on the upper and middle portions of the sternum, was the size of a nut, of a flaccid, soft consistency, the surface uneven; in some places distinct parchment-like rustling was heard. The skin was involved in the tumor. Immediately after birth neither glandular infiltration nor symptoms of compression were present. One month after birth the tumor had increased to twice its size, the skin over it being tensely stretched; one of its lobes extended along the neck, another anterior to the clavicle; in the axilla the glands were distinctly enlarged. Death occurred forty-eight days after birth.—(*Société de Méd. et de Chir. de Bordeaux*, *June 4*, *1897.*)

Stomatodysodia (a bad odor from the mouth) should be treated in the first place as to its cause; we should, therefore, look to the condition of the stomach and the teeth.

For badly-smelling breath MONIN prescribes the following:

℞	Infus. salviæ	250.0
	Glycerini puri	10.0
	Tr. myrrhæ.	
	Tr. lavandul āā	12.0
	Liquor de Labarraque	10.0

M D. S.—For rinsing the mouth.

JACCOND prescribes the following gargle for the same purpose:

℞	Kali chlorici	5.0
	Tr. cochleariæ	25.0
	Decoct. chinæ	200.0
	Mellis rosat.	50.0

M D. S.—External use, dilute and use frequently during the day.—(*Die Therapie der Gegenwart*, *1897*, *xxxviii*, *698.*)

Osteoperiostitis of a Metatarsal Bone following typhoid fever in a child five years old was observed by Dr. E. MÜHSAM (*Berlin*, *Staed. Krankenhaus-Moabit*). Typhoid-bacilli were demonstrated in the pus.

Gastrostomy in a Child Eighteen Months Old. — The child had swallowed a hat-pin, on account of which Dr. NUTT on the following day undertook to open the stomach. The pin was found partly in the esophagus, the head end lying in the stomach. Extraction was readily accomplished through an incision six inches in length, which was then closed with Lembert's suture. For three days the child was nourished by rectal enemata; on the tenth day the incision had entirely healed.

Variola.—

1. ℞	Iodoform pulv.	2.0
	Camphor pulv.	4.0
	Vasel. pur.	30.0

M Ft. ungt. S.—To be smeared on the pocks.
—(*M. Salomon.*)

2. ℞	Tannini	1.0
	Tinct. benzoe	20.0

M S.—To be applied with a camel's hair brush to the affected skin areas.—(*Homolle.*)

3. ℞	Xylol pur.	30.0

S.—Five to twenty drops, every two to three hours, in claret.—(*Zuelzer.*)

4. ℞	Ungt. hydrarg. cin.	24.0
	Cer. flav	10.0
	Pic. nigr	9.0

M Ft. ungt. S.—To be applied on the face.—(*Baron.*)

Hemorrhage from the Bowel.—

℞	Liq. ferri sesquichlor	1.5
	Aq. melissæ.	150.0
	Syr. cort aurant	20.0

S.—One to two teaspoonfuls every two hours.
—(*Bamberger.*)

For Acne Vulgaris.—

℞	Sulf. precip.	5.0
	Zinci sulf.	3.0
	Potas. sulphur.	
	Potas. sulphurati āā	6.0
	Aq. rosæ	100.0

S.—To be used as a lotion, at first twice daily, then once a day.—(*Biddle.*)

For Scabies.—

℞	Flor. sulph.	
	Ol fagi āā	20.0
	Sapon. virid.	
	Axung. porci āā	40.0
	Cret. alb.	3.0

S.—Use as an inunction.—(*Centrbl. f. Innere Med.*)

Atresia Hymenalis.—Dr. BECKER (*Aerztl. Rundsch., 1897, vii, 628*) reports this case. M. G., sixteen years of age, is descended from healthy parents, has never been ill during childhood. For about two years the girl has complained of colicky pains in the abdomen, which return periodically, and are usually treated by the attending physicians by hydrotherapeutic measures. As a rule the pain disappeared in a few days under this treatment and patient was again able to follow her usual vocation. Becker was called to the patient in one of these attacks and learned from the history that the pains, during which the girl threw herself around in bed for hours, returned in about four weeks, and that the child, who by no means gave the impression of being anemic, had never menstruated. A physical examination, which was permitted only after lengthy opposition, revealed total occlusion of the hymen, which felt tough, and was strongly protruded by a tense elastic tumor. He had, therefore, to deal with retained menstrual secretion in the vagina caused by atresia hymenalis. The treatment was of course very simple; a crucial incision opened the hymen and a full liter of dark-brown, semisolid blood was evacuated. After irrigating the vagina with lukewarm water, iodoform gauze was passed in through the incision, and was removed on the following day. The patient was at once relieved, and has since then menstruated regularly, and without pain.

For the Positive Diagnosis of the Bacilli of Diphtheria in the Diphtheritic Membrane. M. NEISSER hasdiscovered a procedure which enables one to make the diagnosis in a short time. The specimen is smeared on plates of grape-sugar serum agar, and these are placed for six hours in an incubator at 34-36° C. At the expiration of this time klatsch preparations, made by lightly pressing the cover glass on the surface of the growth, so that some of the latter adheres to it, are made and stained with a ten per cent. solution of carbolized fuchsin; the diphtheria bacilli now appear as slightly curved, not evenly calibered rods. Wherever the cover glass has come in contact with small colonies the bacilli are placed very irregular: at times parallel to one another, at others more radiating, again crossing each other. In more than 80 per cent. of all positive cases Neisser was able after six hours to make a diagnosis with absolute certainty. Where the result was doubtful the agar plates were returned to the incubator for a number of hours,

Dr. ROYER, of the Faculty of Medicine of Paris, found that, in the Isolation Hospital of Aubuvilliers, where a large number of women with nursing children were sick with scarlet fever and measles, in only two cases did the infants contract the disease from their mothers, and these two cases were very mild.—*La Revue. Med., Dec. 8, 1897.*

PEDIATRICS

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ORIGINAL ARTICLES

A CASE OF SPORADIC CRETINISM.

By J. L. Adams, M.D.,
Morgan, Minn.

A FEMALE cretin, M. S., was born of American parents, June 28, 1893, in Brown County, Minn. The father was 28 years of age, the mother 31, and a sister, the only other offspring of the family, was 7 years of age. Since the Spring of 1892 the family have lived on a farm about one mile back of the bluffs, along the Minnesota river. Goitre is prevalent in this vicinity, but no history of the disease can be found in the family of either parent or in the family that previously occupied the same farm. Gestation was marked by nothing unusual. Labor was normal. The child weighed 9 lbs. The mother noticed that the child was not right when it was six months old. It then weighed 15 lbs. From this time on physical development was retarded. Mental degeneration, also, soon became apparent, and the child gradually sank into a state of idiocy. The disease was recognized when the child was 3¼ years old, and treatment was begun October 23, 1896. One-fourth of a tablet of dessicated thyroid, Armour & Co., was given three times daily, the daily dose to be increased every fifth day by one-fourth of a tablet. The parents were instructed in the use of the thermometer, and in case the temperature rose to 100°, or unfavorable symptoms developed, the dose was to be promptly reduced. Improvement was evident by the end of a week, and on November 16, after twenty-four days of thyroid treatment, the child was brought to my office and photographed (Figs. 1 and 2). The following notes were then taken in the case: Weight, 19½ lbs.; height, 27 in.; circumference of head, 19 in.; hair, thin and coarse; dense scaly eruption on scalp; both fontanelles open, the anterior widely so; forehead low and wrinkled; strabismus; tongue and lips large, lips not closing over tongue; 9 teeth (the first appeared at the eighteenth month); condition of thyroid gland could not be determined; doughy swelling in each supraclavicular fossa about the size of a bantam's egg; neck short and thick; slight scaly eruption on chest, back

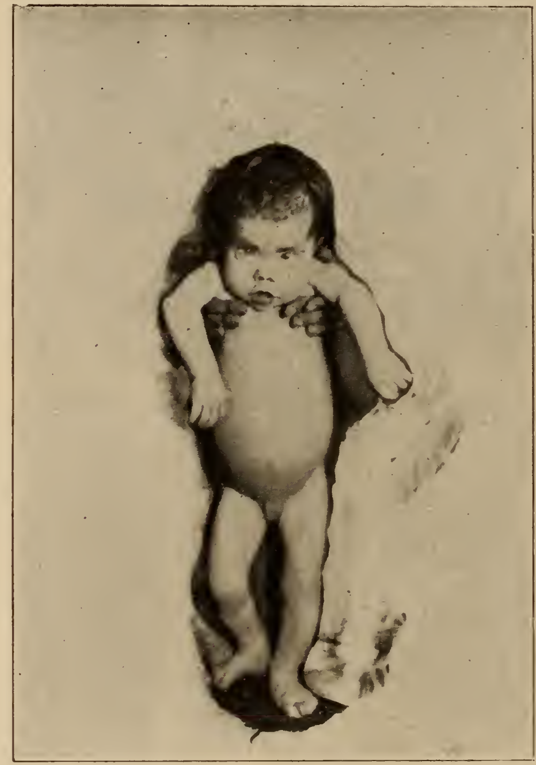

FIG. 1. M. S., FEMALE CRETIN, AGED 3 Y'RS, 4½ MO'S. PHOTO TAKEN 24 DAYS AFTER BEGINNING THYROID TREATMENT; IMPROVEMENT ALREADY WELL MARKED.

and arms; abdomen large and protruding; umbilical hernia; peculiar autero-posterior curvature of spine (shown in Fig. 2); muscular system poorly developed; paresis of lower extremities very marked; cannot stand; ligaments about joints very lax; slight degree of talipes valgus; expression vacant and idiotic; attention attracted with difficulty; cry hoarse and animal-like; constipation and scanty urination habitual. The mother describes the child as being a poor sleeper, restless during waking hours, but subject to "dumpy spells," in which it lay quiet for several hours; also subject to "choking fits,' brought on usually by crying.

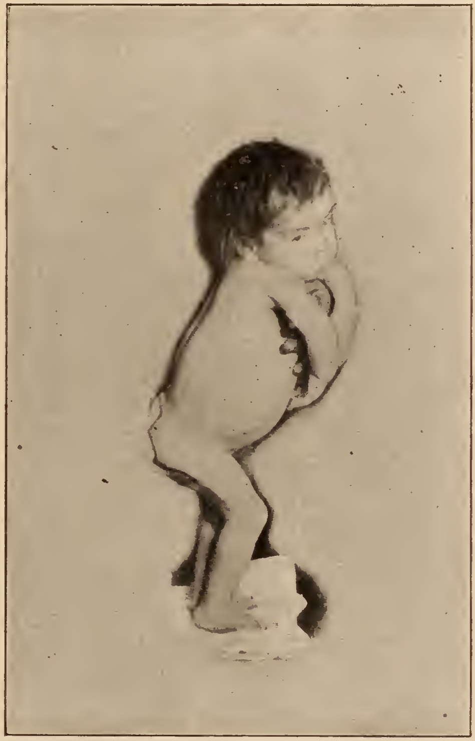

FIG. 2. SIDE VIEW; SAME AS FIG. 1.

The dose of thyroid was gradually increased, and the physical and mental aspects of the child underwent a marvelous change.

Improvement, however, was checked near the middle of January, by an attack of La Grippe, which was followed by a bronchitis of a mild but persistent type. By March 1, treatment was again regularly resumed. About two weeks later the child was seized with attacks of trembling of the lower jaw, very much like what is seen during a severe chill. The seizures lasted only a few moments, but returned many times during the day.

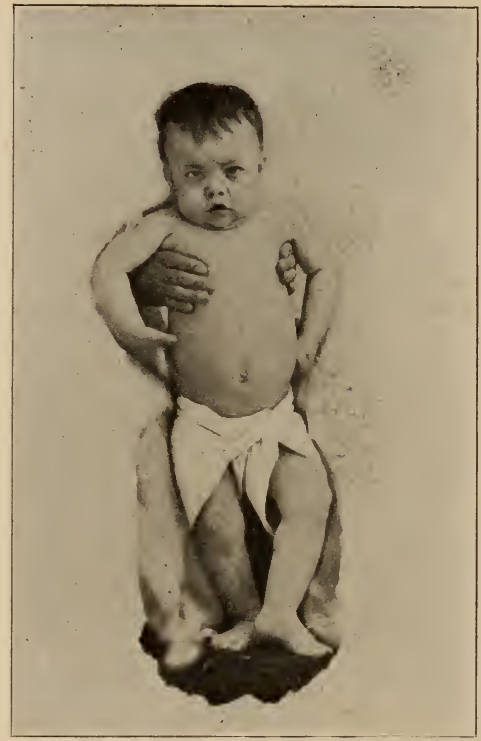

FIG. 3. AFTER 6 MONTHS OF TREATMENT WITH THYROID EXTRACT.

The thyroid extract was discontinued, and the attacks became less frequent, but did not disappear altogether until two weeks later. The treatment was cautiously begun again, and the disagreeable symptoms did not return.

On April 29, six months after beginning the thyroid treatment, the photograph (Fig. 3) was taken, and the following notes taken of the conditions then existing: Weight, 26 lbs.; height, 29½ in.; circumference of head, 20½ in; 17 teeth; pos-

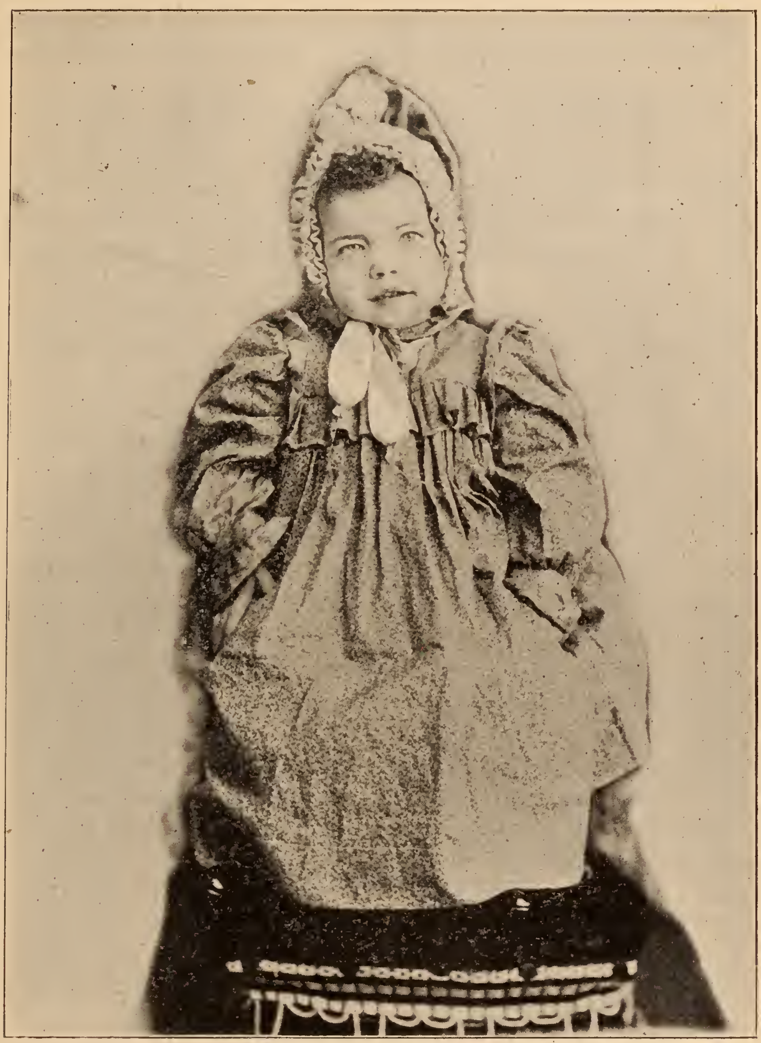

FIG. 4. AFTER 1 YEAR'S TREATMENT.

terior fontanelle closed; the anterior much reduced in size; scalp clean and covered by a growth of normal hair; no supraclavicular swellings; lips and tongue reduced in thickness; no wrinkles in forehead; abdomen near the normal; stands and tries to walk; attention easily attracted and fixed; plays awkwardly with toys; does not crawl along the floor, but moves about by a peculiar sliding process while in the sitting posture; sleeps well; function of bowels and kidneys normal; no "dumpy spells" or "choking fits."

On October 23, '97, one year after beginning the thyroid treatment, the photograph (Fig. 4) was taken, and the child's condition noted as follows: Weight, 32 lbs.; height, 32½ in.; circumference of head, 20¾ in; 20 teeth; anterior fontanelle closed; walks awkwardly; the peculiar curvature of spine scarcely noticeable; speaks several words distinctly; tries to sing and whistle, and does many little things which she is told to do; assists in changing her dress, shoes, etc.; makes known her desire to move bowels or urinate; seldom quiet during waking hours; takes three tablets dessicated thyroid three times daily.

At the present writing the case has been under treatment sixteen months, the last two of which only two doses of thyroid were given each week. Improvement during the last four months has been very slow. The most rapid advancement was made prior to the attack of La Grippe in January '97 during the first ten weeks of treatment. During the Summer months some mild gastro-intestinal disturbances interfered with the progress of the case. The parents added this mite to these drawbacks by giving the thyroid very irregularly, sometimes withdrawing it altogether for various fancied ill effects, which they attributed to the medicine. Practically the treatment has not covered a period of sixteen months, and the sum total of results would have been accomplished in much less time had the treatment been uninterrupted.

A CONTRIBUTION TO THE THERAPEUTICS OF ENURESIS.*

By ALFRED HAND, JR., M.D.
Pathologist and Dispensary Physician to the Children's Hospital, Philadelphia.

ENURESIS is a symptom of so many different morbid conditions, that there can be no specific therapy for the symptom. Belladonna easily maintains its lead in the list of drugs, because the majority of cases are probably due either to a relaxation of the neck of the bladder or to a tendency to spasm of the body of the bladder or finally to a neurosis, in all of which conditions belladonna acts well. That other antispasmodics will sometimes effect a cure when belladonna has failed, is shown by the following history:

R. E. W., 2¾ years old, has always been a robust, healthy boy, except for one or two attacks of bronchitis or gastro-enteritis. The acts of micturition occurred throughout the day and night so frequently that the mother found it "impossible to keep him dry at all." Attempts at training him to make some sign before urination were unsuccessful. Urinalysis showed a specific gravity of 1,012–15, slightly acid reaction, light yellow color, neither albumin nor sugar, but a sediment of a few bladder cells.

Among the drugs given were belladonna, in the form of the tincture, separately and in combination with sodium bromid, camphor water and the solution of potassium citrate; in the form of its alkaloid, atropin, being pushed to its physiological limit; santonin and injections of quassia water without finding any worms; salol and boric acid; and Basham's mixture as a diuretic tonic. The measures adopted included a restriction in the amount of liquid taken, elevation of the foot of the bed, circumcision, and cold douching. None of these seemed to have the slightest influence, except the circumcision, which checked the enuresis for about two days, after which it returned as bad as before.

Finally a prescription for tincture of rhus aromatic was given, but the child refused to take more than one dose of it

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*Read before the Philadelphia Pediatric Society, February 8, 1898.

At the same time, the mother who was in a very nervous state incident to the care of the child, was given some nerve tonic pills with the direction to take one of them four times a day. Misunderstanding the directions, she gave them to the boy, with the result that the enuresis ceased in two days, and has not returned in the past six weeks.

The formula of the pills is:

Ext. Cannab. Ind.	gr. ⅛
Hyoscyamia	gr. 1/400
Zinc Phosphid	gr 1/10

211 South Seventeenth Street.

APPARENT DEATH IN THE NEW-BORN.

By Abraham Goltman, M.D.,
New York.

ON February 10 last, I was called to a case in which delivery was rapid, and the child was born apparently dead; pulsations of the cord weak, heart beats inaudible, and child very anemic. I tried artificial respiration and Sylvester's method, but with little success. I then tried a method introduced by a French physician, called Depaul's method, which is a modification of Chaussier.

A tube is passed into the larynx, and about ten to twenty insufflations are made per minute, assisted by pressure with the hand on the chest. The escape of air after each insufflation is due to the elasticity of the lungs with the aid of the pressure on the chest.

In about half an hour pulsations of the cord and heart beats became more distinct. The child's respirations began, the pallor gradually disappeared, and within an hour the child revived.

386 Manhattan Avenue.

SAFETY PIN—OPEN—SWALLOWED BY A BABY.

By Leon L. Solomon, A.B., M.D.,
Louisville, Ky.
First Assistant in Pediatrics, and Director of the Chemical Labratory,
Kentucky School of Medicine; Pathologist, Louisville
City Hospital, etc., etc.

On the 12th of January, 1898, August W., a boy baby, aged 14 months, passed, per anum, an open safety pin, which had been in the alimentary canal, at least four weeks, and possibly longer. This exceedingly interesting and fortunate patient is now a charge at the Children's Free Hospital, where he was admitted on January 3. The day following his admission, I was asked to see him, and heard the following details: The baby had been "failing" for three weeks; he was fretful, peevish, and very cross, slept poorly, cried out in his sleep, and seemed otherwise to be in pain. He took little nourishment, suffered from diarrhea, and was progressively losing in strength and weight. So far as could be learned, the family record was good. An examination revealed a well developed and fairly well nourished, light complexioned boy baby, of more than ordinary intelligence and cunning, who permitted us to look him over carefully and made no outcry. The result of this examination was entirely negative—lungs and heart in perfect condition, liver and spleen of normal size and not tender, abdomen flaccid, and its contents easily palpated, threw no light upon the subject. The throat was inspected to no purpose. The spine and other articulations also negative. Tongue slightly coated; some fever (99° to 100°); pulse rapid; reflexes not exaggerated; intellect clear. The urine was not collected for analysis. The stools were frequent; character—thin, small, green, containing mucous with curds, and exceptionally foul.

This constituted about all the information which was gathered. It was noted that the sleep was not quiet, and occasionally the face betokened pain. Phosphate of soda, in ten grain doses, was ordered every four, and later every six hours, to meet the indication of foul stools. It acted admirably, and, under guarded feeding, the number of evacuations was considerably reduced. Mucus and some curds continued to appear in each defecation, but the general condition was ameliorated and the baby seemed to improve—at least took his bottle with greater avidity, and was less fretful. During the following few days, nothing out of the ordinary transpired, and until the 12th everything went well. On this day the nurse was astounded to find in his napkin an open safety pin. It was lying loose in the soft stool, and open. The surface was quite black, from its long stay in the bowel, no doubt bile stained. A closer inspection of the pin shows that it is old, and has been so battered that it will not close perfectly. How long it had been in the alimentary tract, and just where it had lodged, we do not know. Of one thing we are reasonably certain, and that is, the pin was not swallowed in the hospital, because over a year has elapsed since pins of this design have been used in the wards.

Three things seem remarkable in this unique case:

First—The inconsiderable local manifestations excited by the very dangerous foreign body.

Second—The fact that the pin must have traversed the entire tract, "right side up."

Third—The length of time during which the pin remained in the child is remarkable.

Aside from much mucous and considerable streaks of blood in the three to five daily evacuations, following the passage of the pin, there have been no further developments worthy of note.

At present, February 8, he weighs again 19 lbs., eats heartily, sleeps well, and has one or two constipated stools a day, which have a natural odor and color.

323 W. Walnut Street.

EDITORIAL COMMENTS

Pediculosis in the Public Schools

Strenuous efforts are being made everywhere to insure the good health and physical well-being of the present generation of school children. Schoolrooms are made bright and airy; the heating and seating are on the most approved principles. In a word, it would appear that almost every human device that will tend to to develop health, brain, and muscle, has been carried out. However, there still seems to be one thing lacking, and which, if report speaks truly, should be seen to as quickly as possible. The charge is made that personal uncleanliness is much too prevalent in the public schools of America. The medical inspector of schools in Boston, writing to the *Boston Medical and Surgical Journal*, January 20, 1898, complains of the prevalence of "Pediculosis in Boston Public Schools," and says that "some of the teachers had been themselves infected from their pupils as many as four times." Dr. Irving C. Rosse, discussing the subject in the *Medical Record*, February 26, remarks: "An exact idea of the prevalence of pediculosis may be had from the figures of one school of 756 children, all girls with the exception of 50 boys, and mostly from respectable families. Of this number but 200, or 26 per cent. were not infected. A dozen or more of these children showed considerable eczema of the face or scalp and enlarged cervical glands, resulting from this pediculosis condition." This state of affairs is a decided slur on the personal habits of some of the inhabitants of Boston, and is another proof of the pressing need of bathing facilities in large towns of America. The proposal brought forward some time ago in Philadelphia of having at the schools a matron, and a room set aside for washing the children's faces and combing their hair, and for giving them a bath at least once a week, is one that might be adopted with advantage by all the towns in this country. This refers to the poorer districts. As an instance of the precautions taken against spreading infection in some of the towns of Europe, the following short paragaph, copied from the Philadelphia *Medical Journal*, of January 18, is instructive: "The common practice of school children kissing the hands of their teachers, has been prohibited in Buda-Pest, it having been decided that from a pedagogic point of view the practice was to no purpose, while from a sanitary point of view, it was at least of questionable utility. The opinion of the chief medical inspector was obtained to the effect 'that kissing the hands is calculated to facilitate the spreading of contagion.' In accordance with this opinion, the teachers were ordered not to permit the children to kiss their hands."

Incubators in London

According to an English weekly journal, one of the most popular of the "side shows" at Olympia, now the headquarters of Bailey's greatest show on earth, is the baby incubating department. These incubators are of English manufacture throughout, and are, moreover, far more elaborate contrivances than their German and French made prototypes. All the infants treated by this method are exceedingly delicate, one of them weighing only twenty ounces, while another is barely nine inches long. Yet it is asserted that between 80 and 90 per cent. are saved alive. The secret of the low death rate among incubated babies is that they breathe only artificially prepared and specially heated atmosphere. The outside air is conducted by a metal pipe into the otherwise hermetically sealed glass chamber in which the infant reposes, passing first through an antiseptic dry filter, and then through a copper heating box. The filter is packed twice every twenty-four hours with cotton wool, which has previously been saturated with a powerful germicide, and then dried. Every two hours during the day and every three hours at night the infants are fed. They are not necessarily awakened, however—indeed they are often asleep for nine or ten days at a stretch—and the greatest care is taken to prevent their inhaling any of the outside air during the process. Sterilized milk only is used, plentifully diluted with water. The inside temperature of the incubators regulates itself automatically; but should, by any chance, anything go wrong with the regulating machinery so that the temperature rises or falls by even so much as the fraction of a degree, an alarm bell is self-ringing, and continues to sound until the nurse's attention is directed to the offending machine, and the defect, whatever it may be, remedied. The incubators cost at present about $300 each, but none are yet upon the market. In regard to this exhibition at Olympia, the *London Lancet* while fully conceding the merits of the incubators, objects to their being made the means of commercial speculation, and says: "What connection is there between this serious matter of saving human life, and the bearded woman, the dog faced man, the elephants, the performing horses and pigs, and the clowns and acrobats, that constitute the chief attraction of Olympia."

Ratio of Mortality Between New-born and Suckling Children

Dr. Jul Eröss published in the *Zeitschrift f. Hygiene*, in 1896, a recapitulation of his investigations on this subject. These investigations cover some 40,000,000 children, and the conclusions arrived at were as follows: The average mortality in the first year was 18.33 per cent. During the same period, the average of infant mortality was 26.9 per cent. of the average total. The average infant mortality is returned thus in the following seven countries: Ireland, 9.4 per cent.; Sweden, 9.7 per cent.; England, 14.4 per cent.; Prussia, 20.7 per cent.; Austria, 24.6 per cent.; Saxony, 28.1 per cent.;

Bavaria, 28.7 per cent. In the twelve countries dealt with, the number of sucklings who died was 7,000,000, of whom 55.59 per cent. were males, and 44.41 per cent. females, whilst 86.43 per cent. were born in, and 13.54 outside wedlock. The greatest portion of the infants die on the first day, and from the second day until the end of the first month the death rate declines by great leaps. From the first week there is an unbroken falling off, only varying by a few days. Nearly one-half of the infants dying in the first month, succumb during the first week. Of the infants born alive, 25 per 1,000 die in the first week, 13.6 in the second, and 22.6 per 1,000 during the fifteenth and thirtieth days, making in all 6 per cent., or about one-third of the total for the first year. One-third of the sucklings die in the first month, and more than two-thirds in first six months. Statistics of this description are of the greatest service, and it would be well if investigations of a similar kind were conducted in this country.

The Feeding of Infants

In France there is a law forbidding any one to give solid food of any kind to infants under a year without the written authority of a qualified medical man. A prominent weekly journal remarks, if there were a similar provision elsewhere for the protection of infant life, these frequent verdicts of "died from improper food," would not be returned, because the person who gave the food would be sought for and answerable to law. There is no doubt but that injudicious feeding is directly or indirectly responsible for most of the infant mortality in all parts of the world. Of course maternal feeding, that is if the mother is healthy, is, up to a certain age, best for an infant, but it is just as much a matter of course, that when badly managed, substitute feeding must quickly be resorted to. Most women, however, can nurse their own children, and it is in the majority of cases, due either to their own or their nurse's ignorance that the lactations are not properly managed, and the milk fails. When this occurs, or when the mother is really unable to nurse her own child, the question then arises, what is the most satisfactory substitute. Dr. George Carpenter, the London editor of PEDIATRICS, a short time ago delivered a lecture on infant feeding, to the post graduate class of the Evelina Hospital for sick children, in which he discusses this question. His opinion is that cows milk modified after the Rotch or Gaertner process, is the best adapted for the nourishment of infants. There is in France (in which country particular attention is paid to all details in respect to the rearing of babies) forbidding the use of feeding bottles with long rubber tubes. Everywhere people are warned not to use them, the reason being that it is impossible to keep them properly sterilized. Dr. Carpenter strongly recommends the Paris feeding bottles, which are supplied with Alt's sterilizer, and have soft rubber teats, which can be readily turned inside out, and thoroughly cleaned. Dr. Carpenter also says, "The old boat-shaped bottle is good. Feeding bottles of this class compel the feeding of the infant by the nurse, the tendency to food-bolting is controlled, and the disgusting habit of placing the bottle in the cot with the child, is prevented." The fact has been conclusively proved in New York and other cities in the East, that infantile mortality has been greatly decreased by means of milk laboratories and certified milk. There is yet, however, much room for further improvement, but it may be anticipated, in view of the progress already made, that the death rate of young children will be, ere long, brought down to a much lower figure.

Hydatid Diseases in Children

Fortunately hydatid disease is in this country at present of comparatively rare occurrence, although there are signs that it is considerably on the increase. If, however, proper precautions are taken at the abattoirs and slaughter houses, it is to be hoped that it can be totally eradicated. Now is the time, before the disease has gained much ground, and while it can be easily controlled, to use measures to stamp it out. In Germany and Australia, where hydatid disease is rampant, and where it claims its victims by the thousands, children are often affected by it. The liver is the most frequent seat of the disease, but it also attacks other parts of the body. Of course the hydatid parasite is, in the majority of cases, transmitted by means of infected meat. It has, however, been suggested that hydatids may be conveyed by infected cows milk. The *London Lancet* of February 19, reports a case recorded by Dr. J. A. Hawke in the *Inter-Colonial Medical Journal*, of operation on a hydatid of the brain, which ended fatally. The patient, a girl five years of age, had complained of headache for some months. In April she had vomiting, and in May she had twitching in the face, extending in July to the right hand. She had never had convulsive attacks. When seen, she had paresis of the right side of the face. The tongue was pushed to the right. The reflexes were exaggerated, and there was continuous hyperesthesia. The pupils were normal and also the special senses. On moving the right arm when excited, she had large, jerky tremors in it. The right leg was rigidly extended. The symptoms varied a good deal in intensity. The skull was trephined over the left Rolandic area over the arm center, and the hydatid discovered and removed, ten ounces of fluid being evacuated. A small drainage tube was introduced, and the bone replaced. The patient did well for three days, when the temperature suddenly rose to 104° F., and she died with marked signs of cerebral irritation. At the necropsy it was found that the cavity in which the cyst had been, opened into the lateral ventricle, and there was no evidence of inflammation. Dr. Hawkes suggested that the sudden relief of the tension affects the cerebral circulation in these cases, and that it might be as well not to drain, but to completely close the wound. It is said that in hydatids of the liver in children, repeated tappings are frequently successful.

Anesthetization of Children

Chloroform as an anesthetic for young children is, even in Great Britain, becoming daily less used. For a considerable time a somewhat heated discussion has been spaoradically breaking out in regard to the relative anesthetic properties of chloroform and ether, but the best authorities appear to have agreed that for very young children chloroform is not the most satisfactory anesthetic. Mr. Hewitt, anesthetist to the London Hospital, reports satisfactory results from nitrous oxide and oxygen. He says: "The best results from the gas I have had with rather debilitated women or children, the patients whom we should expect to behave best under a comparatively light form of anesthesia. In looking over my notes I find that in my three best cases, the patients were children between eleven and thirteen years of age. In all three cases the patients had had other anesthetics on previous occasions and had suffered more or less severely from distressing after effects." Mr. George Rowell, senior anesthetist to Guy's Hospital, having come to the conclusion that chloroform was not indicated for young children, and passing by gas and air, and gas and oxygen, both unsuitable for use by practitioners generally, Mr. Rowell was led to employ ether. His methods are described in the *British Medical Journal* as follows: "Ether, as is well known, has to be given very slowly, so that it takes eight or ten minutes to narcotise a child. There is, however, one test of good surgical anesthesia in the young which is certain and invariable, that is the absence of swallowing, coughing, straining, held respiration, or any alteration in the system of respiration in response to a strong ether vapor suddenly applied. Upon the recognition of this fact Mr. Rowell's method of anesthetization is based. Consequently when a child is once so deeply narcotised as to have lost these reflexes, it is an easy matter to keep it at this uniform depth by taking away the vapor for a few breaths and then re-applying it until this stage is again reached. To attain this condition is, in Mr. Rowell's opinion, best done by giving A. C. E. mixture gradually upon a towel, or Skinner's inhaler, for about a minute and a half, beginning with a drop at a time. When the child, at the end of this period, can freely breathe, the vapor proceeding from a completely wetted single layer of flannel on the inhaler, a stronger vapor of A. C. E. is given from a sponge in a Rendk's mask, and when this is freely respired a drachm or two of pure ether is added. When the reflexes, excited by the ether vapor, are almost or quite gone, the first sponge is removed, and a fresh sponge containing two or three drachms of ether only is rapidly substituted for it, and from this time the administration is continued with strong ether vapor, the mask being applied only when shown to be necessary by the presence of the reflexes referred to. The following advantages are claimed for this method. (1) The time required to produce good anæsthesia is rarely more than four minutes. (2) The guides to the anæsthetist are clear. (3) Flaccidity and freedom from movement during the operation are complete. (4) The after effects bear comparison with those after any other method. (5) The method is safe. Mr. Rowell recommends it especially for children under five or six and for any child with obstruction in the upper air channels."

SOCIETY REPORTS

PHILADELPHIA PEDIATRIC SOCIETY.

Stated Meeting, February 8, 1898.

The Use of the Farinacea in the Diet of Later Infancy.—Dr. D. J. Milton Miller read a paper on this subject. The writer maintained that although the excessive use of the farinacea during early infancy was now generally recognized as injurious, it was not sufficiently understood that caution should be exercised in administering these articles after the twelfth month.

It is a common experience to see infants who have thrived during the first year, suffer continually from indigestion after that age.

This is due to the tendency of the mother and physician to put the child too early upon solid food. Bread, potatoes, strong porridges, and undiluted milk are given, causing frequent digestive disturbances, and, if the practice is persisted in, chronic gastric and intestinal indigestion. The most common cause, however, is the excessive use of the farinacea, or their administration in forms not readily assimilated. Under the mistaken idea that these substances are light and nutritious, they are given as the staple of diet to the exclusion of milk and the more nitrogenous foods.

The sanction of high authority is given to this practice, as will be seen by consulting most writers on infant hygiene, who recommend after the first year, potatoes, bread, strong porridge, rice pudding, and undiluted milk.

It should be remembered that the power of chewing is not fully developed in most children until well after the second year. The folly of giving bread is thus apparent, while in potatoes the starch granules are difficult of solution. Oatmeal porridge in excess, too, is liable to undergo fermentative changes in the intestinal cause. The result of a diet largely composed of these farinacea is often an intestinal catarrh, induced by the constant irritation of the mucous membrane from the fermentation which the carbohydrates are apt to undergo when imperfectly digested.

The diet in the vast majority of instances best suited to the child during the second year, is a nitrogenous one, with a minimum of carbohydrates. Milk should be the staple, and this fluid should not be given undiluted until the eighteenth, twentieth, or twenty-fourth month. The milk should be diluted with gruels or jelly, made by boiling crushed wheat, barley, or oatmeal, for many hours. To this may be added rare or raw scraped meat, as advised by Holt, after the eighteenth month, and at the twelfth or fifteenth month, fruit juices, as orange juice or baked apple. Potatoes and bread are best omitted until the completion of the second year. The porridges may be given at the twentieth month, the preparations of wheat and barley being selected in preference to the more starchy varieties. Difficulty in digesting the farinaceous foods may be met by the addition of a dry extract of malt, or diastasic essence or extract, a few minutes before eating. This will often liquify the food before the meal is finished.

Dr. J. P. Crozer Griffith.—I feel much obliged to Dr. Miller for his useful and interesting paper, with very much of which I agree. Yet as he has mentioned the book which I am guilty of having written, about the care of children, and has criticised gently my diet lists, I may defend it by saying that I thoroughly believe what I have written there. There is no absolute rule which we could possibly apply to all cases. It is impossible, too, to assume an absolute age limit for any sort of diet. Take, for instance, the custom of giving no starch before the age of one year. Most physicians agree that starch should not be given, basing this on the belief that the infant's saliva is not capable of digesting it at this early age. It is interesting to note that Dr. Jacobi—than whom none is higher authority in children's diseases—has, for more than twenty years, maintained that even in early infancy, starchy food is not only frequently useful, but is often absolutely necessary; and that he states, too, that Heubner, after much writing on infant feeding, adopts much the same view. My own feeling has always been against the use of starch before the age of a year, but after much experimentation upon children, I have come to the opinion that sometimes children do, for various reasons, require starch earlier than I had at first supposed, although I still believe that this is the exception and not the rule. Now, if that is true of younger children, it must be still more true of those past the first year of life. The chronic gastro-intestinal catarrh, of which Dr. Miller speaks, is a common disease, but it is very uncommon when we consider the enormous number of children feeding upon starchy food who do not suffer from this disease. Certainly it must occur much more frequently than it does before we can say that no children should be given starch. The diet list for one year, as I have given it, suits, I think, most children. Of course we have to watch carefully in trying any new article of diet. Dr. Miller quotes me correctly that the list given contains the extreme of what a child may have from one year to eighteen months. If I find a child doing beautifully at the age of twelve months upon a diet of milk solely, there seems to me really no hurry that it should be given starch merely because it is twelve months old. The custom of giving potato is common, and is to be deprecated. I am growing more and more of the opinion that potato starch is not a very digestible article for children in the second year of life, and I have taken the liberty of modifying, in the second edition of my book, what I have said of potato in the first edition. I can recall two cases, seen within the last few months, in which potato undid all the good I had been trying to do by careful diet. Oatmeal I would not so promptly condemn as Dr. Miller is disposed to do. It has been my custom not to give animal fibre before eighteen months, but to use beef juice instead. I imagine that no author of any book for mothers, means to present a diet list which a mother may use as she pleases, just because a child has reached a certain age. Such certainly was not my intention nor my teaching. The family physician should say to the mother, "You may use such and such articles." In conclusion, I would say that, while I agree with Dr. Miller that starch is not well borne by many children, I would yet not hesitate, as a rule, to give it to children who had reached the age of one year. In fact, I think that most children should have it in small quantities after this age.

Dr. Miller.—I think the trend of my paper was somewhat misunderstood. I quite agree with Dr. Griffith that small amounts of starch are digested by infants. The point I intended to prove, and what my observation seems to prove, is that the more solid preparations of starch given so abundantly by many people to young children are the cause of much ill health and sickness. During the first year the starches can be given, but in that case they are given simply as a diluent to the milk, and best, as Dr. Jacobi states, in very large dilution. (I have always suspected that much of his success is due to this fact). He recommends in an infant under two months old a very thin decoction of oatmeal or barley. Take a teaspoonful of either, ground in a coffee mill, and a pint of water, and boil fifteen minutes. This is really a mere glutinous decoction. He directs milk to be diluted four or five times with this decoction during the first two months, gradully increased until, at the sixth month, the child is getting half and half. There is no objection to giving starch in this way; but my own observations are that a child will do better up to eighteen or twenty-four months on a diet in which the farinacea, particularly in indigestible forms, are largely excluded. Given in gruel mixed with milk, they are of great value. Repeatedly I have seen children, whose dentition was delayed, cut their teeth in a very short time after the administration of a mixture of barley or wheaten gruel with the milk, particularly that made from the whole grain.

"Auto-intoxication with a Report of a Case in an Infant of Fifteen Months."—Dr. Samuel McC. Hamill read a paper on this subject. He described the limitations within which this term should be applied, and spoke of the various methods by which the organism protects itself against the self-formed poisons, especially emphasising the excretory function of the gastro-intestinal mucous membrane. He suggested the possibility of a selective excretory tendency on the part of the various emunctory organs, that is, an ability on the part of certain ones of them to dispose of poisonous substances which are incapable of being eliminated by any of the others. He endeavored to demonstrate the fact that ptomaine poisoning cannot be classed among the auto-intoxications, and protested against the present promiscuous and unjustifiable use of the terms leukomaine and ptomaine poisoning. The case reported was a fifteen months' old infant, who, after having had an attack of what seemed to be acute gastro-enteritis, gradually developed a condition of depression eventually amounting almost to coma, which was accompanied by thirty-two hours' suppression of urine. The first urine voided after the recovery contained no albumin nor sugar, and had a specific gravity of 1,012.

Dr. A. A. Eshner.—Were it not, perhaps, better in discussing the subject as Dr. Hamill has presented it, to use the term auto-intoxication rather than auto-infection? While I admit that in the present interpretation of the word it is not impossible for auto-infection to occur, it seems to me that this condition must take place very rarely. I use the term "infection" myself, and it seems to me it is the general use of the present day, to indicate a condition that is dependent upon a cause which is capable of multiplication and transmission. The intoxications usually do not conform with this definition. The infectiousness of diseases that belong in this group depends upon the vitality of their existing causes. In contrast, there occurs in the intoxications a gradual dilution and attenuation of the injurious agent, so that finally its power is entirely lost, and its influence ultimately disappears; while in the infections the condition is quite the reverse. A small amount of infective material can be enormously multiplied, and in this way its influence be indefinitely increased. A great deal of what Dr. Hamill said leads me to believe that it was auto-intoxication of which he spoke rather than auto-infection. It cannot be denied that the latter conditionally occurs. Thus, a careless tuberculosis patient, who will dispose of his excreta in an indifferent manner, may re-infect himself, by contaminating his food or drink, or by direct introduction of the micro-organisms into his mouth or into wounds upon the surface. So, too, the patient harboring a tapeworn. may re-infect himself or herself, may produce auto-infection by contaminating the fingers, perhaps, or some other portion of the body, with the ova of the parasite, and receiving these into the stomach, where they go through another stage of development; or the ova may gain entrance into the stomach by the migration of portions of the parasite, or through reversed intestinal peristalsis. It seems to me that occurrences like these might be considered instances of auto-infection, while most of the manifestations that come under our observations, as symptoms arising from gastro-intestinal derangement, are toxic in nature and not infective or of bacterial origin primarily.

Dr. A. E. Taylor.—I sympathise very much with Dr. Hamill's limitations in the use of these terms, which are certainly too loosely employed. A good illustration is pernicious anemia, which, it seems to be well established, must be regarded as a condition of excessive blood-destruction, due to a poison absorbed probably from the gastro-intestinal tract, and acting largely in the portal circulation. In one case Hunter found a ptomaine, and at once the disease was classed as a ptomaine-intoxication. Since then I have searched for ptomaines in the urine of patients with pernicious anemia and leukemia, and always with negative results; and as that has been the experience of nearly every one who has hunted for them, we cannot continue to consider this anemia as a ptomaine intoxication, although we are certain that it is an intoxication. It is very easy to say "ptomaine poisoning," but it is very difficult to find the ptomaines. The term should not be used unless we can demonstrate the existence of the ptomaine, or the cases possess a characteristic symptomatology, which we do not as yet know. The diagnosis should be as rigidly made as in any case of poisoning, as, for example, in lead-poisoning.

Dr. Edsall.—I have examined the feces and urine of several cases by Brieger's method, and have been unable in any of the cases to discover any ptomaines, even though it seemed quite probable that gastro-intestinal auto-intoxication existed. One was a case in which attacks of syncopy or extreme giddiness, with a good deal of prostration, came on at the same time, with marked constipation, and the relief of the constipation entirely dispelled the other symptoms. Another case was one of extreme dilatation of the stomach, with stagnation of food, and in this case there were repeated attacks of prostration with diarrhea, without evident cause other than their dependence upon the condition of the stomach. Indeed, our knowledge in regard to the actual existence of ptomaines in cases of suspected gastro-intestinal auto-intoxication is very scanty. Gumprecht, in recently discussing auto-intoxication in tetany, occurring in dilatation of the stomach, was unable to satisfy myself that any observer had proven the existence of toxic substances in the execretions of such cases or in the stomach contents, and in his own case he was unable to isolate such substances from either the urine or the stomach contents.

Such cases would seem to offer the best opportunities for ptomaine formation.

Dr. J. P. Crozer Griffith.—The form in which these auto-intoxications show themselves oftenest in children, is that in which there are marked gastro-enteric symptoms. In the milder forms, we see only a coated tongue, constipation, and vomiting of moderate degree, the whole attack being over in a day or two. We err if we attribute the condition to something the child has just eaten which has disagreed with it. It is rather that there has accumulated in the system, perhaps, the result of indigestion, bodies of a poisonous nature. The gastro-enteric symptoms come from the inside rather than the outside. It is some fault of metabolism. Dr. Rachford has written some very interesting articles tending to show the influence of xanthin and paraxanthin in producing various symptoms which may be classified as those of auto-intoxication. But whether these bodies or others found in the urine are the cause, is not yet certain. One of the severest forms of auto-intoxication is that going sometimes under the name of cyclic vomiting. In this condition there develops at intervals, more or less separated, violent, repeated, uncontrollable vomiting, lasting, it may be, for days, attended by profound collapse, and sometimes terminating fatally. Yet the condition can in no way be associated with any recent indiscretion in diet. Dr. Snow, of Buffalo, has reported such a case, and Dr. Holt another. In the latter the symptoms appeared to be possibly of a lithemic nature, since there was evidently retention of uric acid in the system during the attack, and freer excretion of it after the attack passed off. That is, the relation of urea to uric acid was decidedly altered. In the last year or two I have had several cases of this cyclic vomiting under my observation, two of them desperately ill, and one other ending fatally. I have not been able to obtain satisfactory examinations of the urine in all of the cases, but as far as they have extended, they would indicate a similar alteration of the relation of urea and uric acid. Yet, after all, the retention of uric acid is perhaps only a symptom and not a cause. It is just as likely that some other substance in the urine may be at work, whose nature we do not at all understand. It is possible, too, that the attacks are of the nature of a neurosis purely, not dependent upon any poison; but I confess that they seem to me to be dependent more probably upon auto-intoxication.

Dr. F. Savary Pearce.—I merely wish to verify what Dr. Griffith has suggested, that many cases of so-called auto-intoxication are probably of a metabolic origin. We are apt to lay too much stress upon the microörganismal cause of these symptoms in children and in adults; whereas they may be due to excretions, and the intestinal irritation is then the result of a metabolic excretion by the gut, as of uric acid, which should nominally be thrown off by the kidneys mainly. I have had some experience in the quantitative testing for uric acid, and in a patient with aggravated alternating constipation and severe diarrhea, I found that upon the whole there was marked diminution of uric acid in the urine. The question came to my mind after I had been studying this and other cases, whether the diarrhea this neurasthenic man had at times, was not, perhaps, due to uric acid excretion by the intestines; and it seems to me that one detailed* case pointed pretty conclusively to a uric acid excretion by the intestine. There was no other discoverable cause. I wish to affirm belief in the metabolic origin of many obscure cases with intestinal symptoms, and that microörganism, and their products are given too wide a rôle in the etiology of gastro-intestinal symptomatology.

Dr. S. McC. Hamill.—The work which Dr. Edsall has referred to I have seen. I was very much impressed with the results of the analysis there given. I do not think that in the long list of cases collected, one could say that a substance had been isolated which could be considered to hold a definite causative relationship to the existing tetany. Bouchard has laid great stress upon mild degrees of dilatation of the stomach as a cause of auto-intoxication, I think entirely too much. I believe that the conditions in the intestinal tract are much more favorable to the development of fermentative processes and to consequent formation of toxic substances. Constipation is a much more common condition than dilatation of the stomach. It gives rise to a retention of toxic substances in the

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*The Role of Uric Acid in Certain Types of Neurasthenia.—*Virginia Medical Semi-Monthly*, June 25, 1897.

intestinal tract, and as a result of a diminished peristalsis. There occurs a lessened secretion or excretion on the part of the intestinal mucous membranes. It is not improbable also that toxic substances which may be eliminated in this condition, by gradually accumulating within the intestine, are reabsorbed. I have referred in my paper to the importance of the gastro-intestinal tract as an organ of elimination, to which fact Drs. Griffith and Pearce have also referred. I am not inclined to consider the gastro-intestinal symptoms, which we frequently meet with in these cases, secondary manifestations as these gentlemen are. In my experience the auto-intoxications observed in children have always been preceded by some evidence of gastro-intestinal disturbance, most often by constipation. In the case which I have reported to-night, the very first manifestations were of gastro-intestinal origin, the toxic symptoms occurring gradually and becoming most profound after all evidences of the gastro-intestinal disturbance had disappeared.

Dr. Alfred Hand, Jr., presented **A Contribution to the Therapeutics of Enuresis.** (See page 293.)

House Epidemic of Enteric Fever Among Children.—Dr. George Woodward reported this paper. Enteric fever in childhood follows an erratic course judged, by the classical symptoms of the disease in adults. The six cases I present to you are no exceptions to this well-established observation. The diagnosis for this reason becomes more doubtful. The Widal reaction becomes more valuable. Two of my cases were not seriously put to bed until the blood examination made it imperative. None of the cases came under my observation until the acme of the temperature curve had nearly been reached. The essentials of symptomatology and treatment are as follows: Malise, frontal headache, anorexia, and constipation. No epistaxis. Evening, maximum; morning, minimum of temperature. Lips parched and fissured in cases No. 1 and No. 2. Tongue, in all, furred in center, showing red tip and edges. Abdomen not prominent nor tender; spleen not palpable, with one exception. Lungs of five gave symptoms and signs of bronchitis. One had a characteristic crop of rose spots. One had furuncles. One relapsed.

Treatment: Rest in bed as soon as the diagnosis was made; liquid diet at two and three-hour intervals; calomel in the earlier days; strychnine three or four times in the twenty-four hours; codein in two cases; whiskey at three-hour intervals—in the case of the relapse, brandy or whiskey was given every hour for twenty-four hours during the height of the relapse plunge baths at three-hour intervals when the temperatur was above 102.5^0. Last, but by no means least conspicuous, enemata. Two cases showed transient diarrhea.

I have brought two of the charts and hourly reports to illustrate the two cases interesting from a bathing standpoint.

Kate N., aet. 15, was a bitter anti-bather; Florence C., aet. 10, submitted gracefully. They were both quite ill, Kate showing an unstable nervous equilibrium; Florence requiring hypodermics of strychnine, brandy to overcome nausea, and whiskey at hourly intervals until the breath betrayed the odor of alcohol, *i.e.*, until the physiological limit had been reached. Kate came out of the bath blue and irritable, with often an increased teperature and pulse rate; Florence complained only of her furuncles in the bath, responded well, and when rolled in her blanket soon went to sleep. The cases are now all convalescent, pale, thin, and voracious. Florence was the most seriously ill, and for this reason the behavior of her blood in the Widal test becomes instructive. She came under my care January 3. January 5, the blood did not arrest the movements of the typhoid bacilli; January 8, negative; January 12, the bacilli were inclined to clumping, but not arrested; January 18, temperature normal, the reaction was pronounced; January 20, the temperature rose sharply, and the case relapsed. Dr. Stewart, of the City Bacteriological Laboratory, who made the Widal tests, informs me that he always finds the reaction tardy in the severe cases.

The epidemic occurred in Bethesda Home, Chestnut Hill. There are 180 children in this institution, distributed among four houses. Near the older girls' house is a well 25 feet deep; nearer the house, and on higher ground than the well, is a cesspool 25 feet deep and uncemented. The cesspool was in constant use for many years, until January, 1897, when the four buildings were connected with the city sewer. The cesspool was then discontinued and filled with ashes, but was not cleaned. During the Summer of '97, the pump water was freely used by all the children. As the colder weather approached, the children resident at some distance from the pump did not drink the well-water. The older girls, however, who lived in the immediate vicinity of the well, continued to drink from it.

The older girls, also, had a separate milk supply. I submitted water and milk to chemical and bacteriological tests. I had, two years and a half previous to this outbreak, submitted the water to chemical analysis, and now exhibit to you the two reports, which form a highly instructive contrast. I also show you the bacteriological reports upon the milk and water:

	Parts per Million.	
	June 12, 1895.	January 5, 1898.
Chlorine	12.32	19.470
Nitrites	None	0.006
Nitrates	2.00	8.000
Free Ammonia	Traces	0.140
Albuminoid Ammonia	Not Determined	0.060

The result of examination of water from Bethesda Home, at Chestnut Hill, shows 8.100 bacteria per c.c. (Sample sent in 1–12–'98.)

The result of examination of sample of milk from "Home" shows 17.000 bacteria per c.c.—M. B. Garvin, Bacteriological Division of the Bureau of Health.

PRACTICAL NOTES

Epileptiform Seizures in an Infant aged ten months.—Dr. J. A. Larrabee reported to the Louisville Medico-Cherurgical Society a case of epileptiform seizure in an infant ten months old. The child, in spite of eleven characteristic attacks of petit mal in twenty-four hours continuing for fourteen days, did not seem to be affected in its general health. The family was decidedly neurotic. One older child had passed through a similar condition, and had recovered under treatment. As there was a suspicion of specific taint, anti-syphilitic measures were being employed, but without benefit up to the present time in the case under consideration.—*American Practitioner and News, February 1, 1898.*

Malnutrition in Infants.—The following emulsion is recommended as useful in cases of rickets or chronic malnutrition:

℞	Olive oil	ʒiii
	Glycerine	ʒiss
	Yolks of two eggs	

Make an emulsion and add one-half minim of creosote to each drachm.—*Ex.*

Urticaria.—

℞	Chloralis	
	Camphoræ	āā ʒi
	Pulv. amyli	℥i–ii

M. Sig: Keep tightly corked in a wide-mouthed bottle. Rub in with the hand.—*Bulkley.*

Wash for Rhus Poisoning.—

℞	Sodium sulph. granular	ʒi
	Glycerine	f. ℥ss
	Camph. aq., q.s. ad	f. ℥ iv.

—*Berringer.*

A Case of Skin-Diphtheria.—MAX MULLER reports a case of diphtheria of the skin in a child 2½ years old, whose face, neck, and abdomen, had been severly burned with hot water. When the dressings were taken off at the end of a week, the mother kissed the child's neck. The next day the mother developed diphtheria. On the third day the skin on the child's neck showed a white swollen spot, four centimeters in diameter, bordered by red streaks, and surrounded by an edematous area, which soon spread as far as the right eye. Two injections of serum were given, and the lesion healed. The child remained free from infection of the throat.—*Can. Med. Rev., February, 1898. Berl. Klin. Wochensch.*

Difficult Defecation in Infants.—T. C. MARTIN concludes, from the study of specimens of infant recta and sigmoid flexures, that difficult defecation is due to imperfect development of the anatomic features concerned in the mechanism of expulsion, which are as follows:

1. The infant's lower bowel is muscularly deficient.
2. Its mobility within the abdomen is obstructive to defecation.
3. The rectal valves are deficient.
4. The anus is not sufficiently expansible.—*Jour. Am. Med. Ass., February 19, 1898.*

Sprouting Lemon Seeds in the Intestinal Canal.—R. D. MASON reports the case of a boy, aged 6 years, whom he was called to see. The symptoms were those of appendicitis. A grain of calomel every hour for six hours, followed by a small dose of epsom salts, operated freely and several lemon seeds were found in the stools. The child fell into a low typhoid condition. The bowels still being constipated, calomel was again given, resulting in the bringing away of several more lemon seeds, some of which had sprouted. More seeds, with sprouts an eighth of an inch long, were passed later. The bowels were kept loose and the child recovered. The seeds had been in the alimentary tract for at least two weeks. —*Medical Record, February 19, 1898.*

Prolonged Treatment of Infantile Paralysis, Followed by Recovery.—COLLIER reports a case of recovery from infantile paralysis after treatment for two and a half years. The child was admitted to the hospital with a paralysed, contracted, and withered leg. The tendo achilles and posterior tibial tendons were first divided, and the foot brought to its normal position; then galvanism, massage, and friction were resorted to. At first reaction of degeneration was marked, only slight response to the slowly interrupted continuous current could be elicited. Treatment was persisted in, however, and at the time of the report the patient could walk well and for long distances without assistance, and the movements of the foot were perfect.—*Chin. Jour., January 5, 1898.*

Massage in Intestinal Invagination.—A case is reported by Westerveld in which a child of eight months was suddenly seized with vomiting; rapid pulse, anxiety, and slight distension of the abdomen accompanied this. A sausage-shaped tumor, directed from below upwards and from the left to the right, was found the next day, the general condition having been benefitted by a glycerine injection, and a dose of bicarbonate of soda. Rectal examination enabled the diagnosis of invagination of the large intestine into the ileum to be made. Reduction could not be effected. An injection of warm water was unsuccessful. Before performing laparotomy, Westerveld decided to try massage. The well oiled right index finger was introduced into the rectum, while with the oiled fingers of the left hand, he masséd the tumor externally, making friction from below upwards. After five minutes of massage, large rectal injections were made, which caused immediate disappearance of the tumor. Two drops of laudanum were then administered to keep the intestines quiet.—*La Rev. Méd. January 12, 1898.*

Alimentation with Peptone.—Catillon reports in the *Bulletin de Thérapeutique* tables, showing the results of laboratory experiments with peptone alimentation. These tables give (1) The amount of peptone taken; (2) The body weight; (3) The urea excretion. The first step in the experiments was to obtain a standard, which was done by using normal diet for three days, the body weight and the urea excretion being estimated. Then for three days, the meat was omitted, and results noted. After this peptone powder was added, and the strength, weight, and urea-excretion all increased. Peptone was also taken by the rectum, and had the same effect. Another table is given, comparing the effects in twelve very serious cases on peptone diet, and forty-five less severe cases on milk diet. The former showed more rapid and more permanent improvement. From the experiments, it is concluded that milk diet occupies an intermediate position between a full normal diet and one of peptone, but that the latter is more rapid, is more readily absorbed, and can be used for rectal alimentation to better advantage.—*La Clinique, February, 1898.*

Value of Blood Examination in Pneumonia (especially with reference to Prognosis.)—(1) The diplococcus has been found in a certain number of cases; (2) Coagulation is very rapid; (3) Specific gravity is high in pneumonic children, and decreases after resolution sets in; (4) During the height of fever, red blood corpuscles are normal—post febrile anemia of moderate degree may occur, which may be greater in cases in which jaundice occurs; (5) Leucocytes are increased more or less—the leucocytosis may occur as early as the initial chill—the relation in temperature and leucocytes curves do not correspond exactly, but no decrease in leucocytes occurs at pseudo crisis, the reverse may take place; (6) The number of leucocytes is regarded by different authorities as (*a*) dependent on extent of lung involvement, or (*b*) virulence of organism and power of resistance. Cabot makes the following classification: 1—Mild infection, vigorous reaction, slight leucocytosis; 2—Severe or moderate infection, vigorous reaction, marked leucocytosis; 3—Severe infection, feeble reaction, no leucocytosis; (7) The prognosis is more grave in cases with no increase in the white cells; (8) Leucocytosis is a valuable diagnostic point in "central pneumonias," definitely excluding typhoid fever, malaria, and uncomplicated influenza; (9) Glycogen has been found in the blood of many pneumonia patients.—*Jour. of Pract. Med., January, 1898.*

ABSTRACTS

CASE OF GIGANTISM OF FOOT

William H. Carmalt (*Yale Medical Journal, 1898, iv. 257*), reported a case of Gigantism of Foot. The first four of the accompanying illustrations are of the foot of a child of about sixteen months of age, whose parents consulted him as to the possibility of relief from the deformity there shown, which, while not giving rise to any pain, was unsightly,

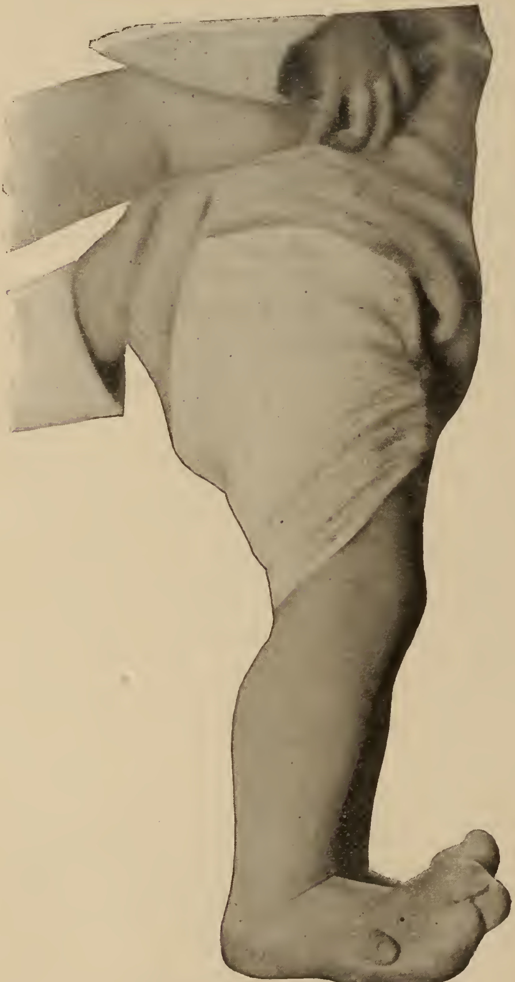

FIG. 1. GIGANTISM OF FOOT. PROFILE VIEW.

and caused considerable awkwardness of gait; they also had difficulty in getting shoes for the child to wear. The figures show an inordinate growth, especially of the second, third, and fourth toes of the right foot, though a comparison of the two legs shows a uniform increase in the size of the whole right leg, extending up to involve the right labium majorum to a slight degree. The remaining two toes, the first and the fifth, appear, by comparison with those of the same foot, not to have participated in the hypertrophy, but a comparison with the fellow toes of the opposite foot shows, however, that these are larger than normal. Besides the growth of the toes, a very great development of the solar fat is to be

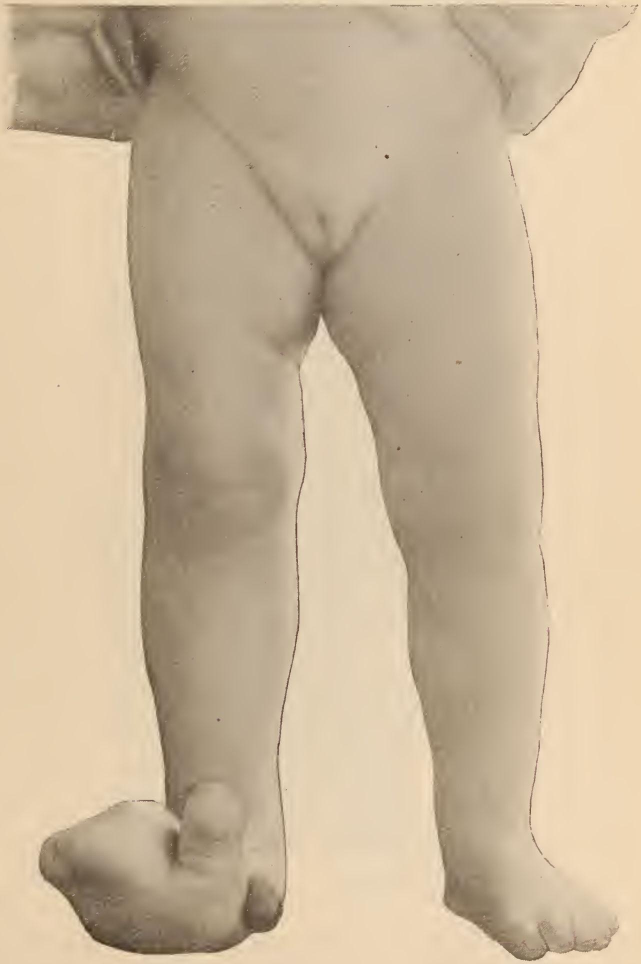

FIG. 2. GIGANTISM OF FOOT. ANTERIOR VIEW.

noted, which makes the deformity even more marked than the hypertrophy of the toes.

The most interesting of the group of illustrations, however, is the skiagraph, which he owed to the courtesy of Professor Smith, of the Yale Medical School. This, which is taken from above, shows the situation of the bones within the mass of soft tissues, and the first look at the picture reminds one much more of a hand than of a foot. Indeed, in several instances, when he had shown the skiagraph to friends, some inquiry or remark was at once made, showing that this was the impression conveyed to their minds, and it nearly always required an explanation to disabuse them from that idea One sees the phalanges lengthened beyond all proportion from that ordinarily seen in toes, and widely separated by the intervention of a considerable amount of adipose tissue. The ossification of the diaphyses of the long bones shows perfectly the stage of development for this age; the epiphyses and joint structures being still cartilaginous, they are transparent to the Roentgen rays, and show, apparently, a

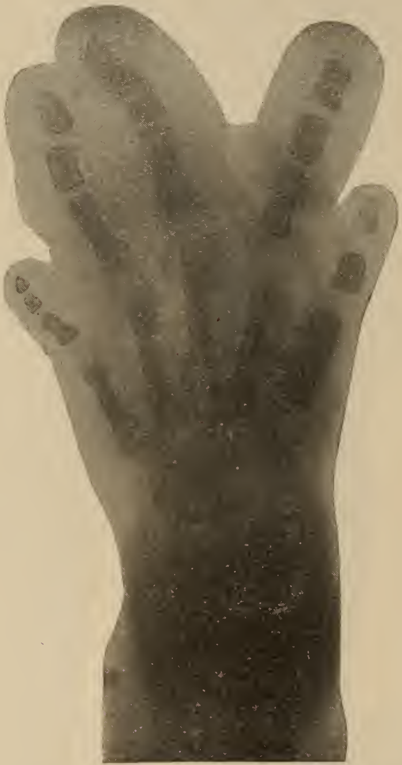

FIG. 3. GIGANTISM OF FOOT.—SKIAGRAPH SHOWING BONES.

considerable longitudinal separation between the bones—it is, perhaps, unnecessary to state that this is not the case.

A measurement of the third and fourth toes showed their circumference at the base to be the same as the circumference of the whole opposite foot.

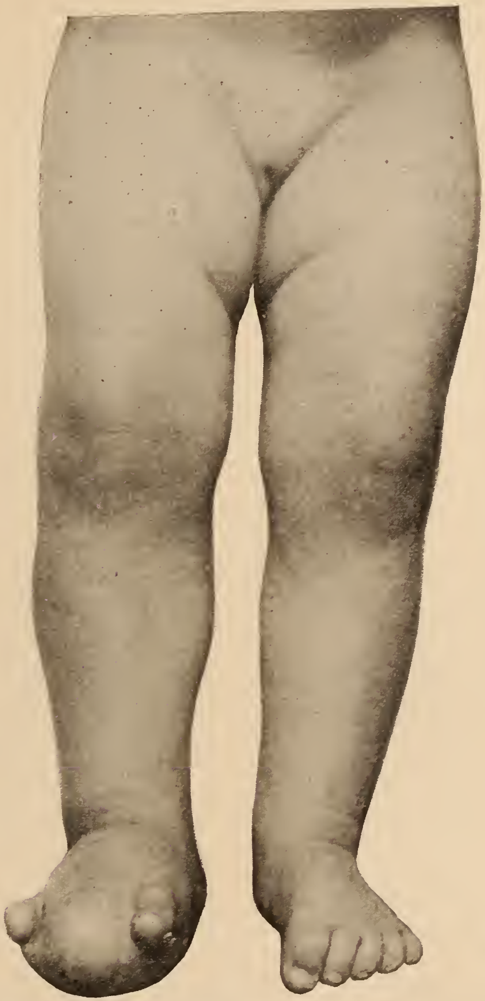

FIG. 4. RESULT OF OPERATION FOR GIGANTISM OF FOOT.

The operation for relief consisted in amputating, by a wedge-shaped incision, the third and fourth toes, including their metatarsal bones (disarticulating these at their tarsal attachments), and also in removing the second toe at its phalangeo-metatarsal articulation. As much of the superabundant fat was taken away as was thought advisable. The parts were then brought together and firmly bandaged. The comparatively large wound healed by first intention; the bandages were first removed at the end of ten days and lighter substituted. In about three weeks she was allowed to go about wearing a fairly firm elastic band about the whole foot, and with this she walked with much less awkwardness. The general appearance is well shown in the last (Fig. 4) of the series of photographs.

He also presented at the Surgical Clinic of the Yale Medical School, a skiagraph of the foot of a child with, apparently, an attempt at duplication of the great toes. Each had a rudimentary double nail; each was broadly flattened out laterally, and drawn very considerably inwards by a contraction of the fibrous structures about the joint and the lateral fibres of the plantar fascia. The skiagraph was taken to determine if there were supernumerary phalanges to correspond with the supernumerary nails, but none were found, as the skiagraph shows, the little apparently detached particle of bone seen being really the terminal phalanx of the proper great toe. The superabundant tissue was removed, but it required a plastic operation to fill up the gap made in the skin when the fibrous structures were divided and the toes straightened.

Plates reproduced by courtesy of the *Yale Medical Journal.*

THE DIAGNOSTIC VALUE OF HEART-MURMURS IN CHILDHOOD.

Soltmann (Leipzig), (*Der Kinderazt, 1898, ix. 2*., discussed the above question at the sixty-ninth congress deutscher Naturforscher u. Arzte zu Braunschweig. He mentions the fact that the heart of the child is less affected by disease than that of the adult; and this greater resistance to disease has an anatomical and physiological reason in the relation of both ventricles to one another (L. R. 6.2; 6.5) in the abnormal elasticity of the great vessels, and in its relatively greater muscular development. The difference in the anatomical relations of the heart of the child has not as yet been utilized in diagnosis, but only its relations as to position (apex, impulse, dullness, outline) or, perhaps, also to certain deformities of the thorax, which are occasioned principally by rhachitis, spondylitis, phthisis or pleuritis. Hochsinger is the only one who has studied the anomalies of the child's heart in the relations of auscultation, and who has recorded his experience. In a work lately published, Saupe has called attention to the difficulty in auscultating the systolic murmurs. According to Soltmann, anemic murmurs, as has also been pointed out by Hochsinger, are exceedingly rare in the first four years of life, and are rare even up to the eighth year. On the other hand, they appear to be the rule at the time of puberty, in anemia and chlorosis. This peculiarity is based on the low pressure of the ventricle, and the extraordinary large parts of origin of the great vessels (aorta and pulmonary artery), in which condition, of course, no discord can be produced. As, however, the conditions are reversed at the time of puberty, the heart at its maximum growth and the origin of the vessels being relatively narrow (heart: vessels = 290:60), the frequent occurrence of anemic cardiac murmurs at this time may be explained. Whenever cardiac murmurs were noticed during the first few years of life, they could be explained by pressure (enlarged glands, deformities of thorax). If we diagnosticate an anemic murmur in an older child, a positive anemia should exist; acute infectious diseases must be absent; the murmur should be heard with greatest intensity at the pulmonary valve—at any rate more pronounced here than at the apex, and should be purely systolic; the second pulmonary sound must not be accentuated, and the apex impulse must be confined in or within the mamillary line, without a heaving character, and there must not be present a jerking pulse. The same which is true for the anemic murmurs—that these are absent during the first few years of life—is also true for the so-called cardio-pulmonary murmurs, which are formed by the extension of the contractions of the heart and its movements to the lungs, which is perfectly physiological, and to which also Hochsinger was the only one to call attention. The cardio-pulmonary murmur is usually systolic (therefore easily mistaken for an anemic murmur); synchronous with the heart's action; intermittent; of various character; can be differentiated by the fact that it is increased in forced respiration and becomes silent in suspended respiration.

The endocarditic systolic murmurs are also met with in mitral insufficiency, and are occasionally its only indication. We have, then, still the heaving apex impulse. All other symptoms that we meet with in acute endocarditis of the adult may be absent, namely the cardiac enlargement, the barking second pulmonary sound, even the increased tension of the pulmonary artery, with symptoms of congestion and disturbances of compensation.

Discussion—Hochsinger was much pleased to find all his views corroborated by Soltmann, and had only to remark that he intended to convey the meaning, when he said that the diagnosis of heart disease was easier made in childhood than in later years, that this was the case only in the first years of life. The fact, also, that a systolic murmur may, for a long time, constitute the only symptom of an endocarditis, has been dwelled upon in his work on auscultation of the heart in children.

Pott has also frequently observed a systolic murmur in children two years of age, especially following chronic, debilitating diseases (pseudoleukemia, leukemia, rhachitic cachexia) and that not only at the apex of the heart, but also over the pulmonary valve, more rarely over the aorta, and considers this murmur an anemic one. Their etiology is referred by him to abortive forms of articular rheumatism, in which he also includes the common coryza with articular pains. He calls attention, also, to the systolic murmurs following gonorrheal arthritis in girls, which may again disappear after years, from a readjustment of the slight pathological changes.

Steffen (Stettin) was able to demonstrate that organic heart disease cannot occur without dilatation of the child's heart. If a murmur be present without the latter, no organic disease is present.

Hochsinger, in answer to Pott, states that he was unable to discover anemic murmurs in leukemia, pseudo-leukemia, and rhachitis. When systolic murmurs were present, they were not accidental, anemic, but extracardiac murmurs. For example, cardio-pulmonary murmurs or compression murmurs, as in greatly deformed rhachitic chests.

Soltmann, in answer to the explanations by Pott and Steffen, remarked that he had only in mind cardiac systolic murmurs. He had also observed the occurrence in pseudo-leukemia of so-called anemia, cardiac systolic murmurs. These children, under four years of age, were, however, subject to glandular enlargements, and the murmurs were due to compression. In rhachitis we have to deal, especially in deformity of the heart, with cardio-pulmonary murmurs, as the heart is here obliged to carry over its contractions with especial energy to the adjacent lung portion. They always disapper when respiration is suspended. In atrophic young children they are due to a degeneration of the heart muscles, a relative valvular insufficiency having been establish by dilatation. The enlargement of the heart, which Steffen claims to have always discovered with organic systolim murmurs, is based on a misconception of the left ventricle. We have to deal only with a change of position by displacement, the left auricle, greatly distended, pushes the ventricle in front of it, which produces a conception of enlargement, to which v. Noorden and Schmalz have already referred.

THE TREATMENT OF SCROFULOUS CHILDREN.

Ritter (Berlin) ibid., lays stress on the great importance of a long residence in fresh air, as well as the necessity of feeding fresh vegetables, salads, fruit; and recommends cod liver oil, pulmonary gymnastics, methodical friction, and sun and sea baths.

HOW MAY THE PHYSICIAN PROTECT HIMSELF AGAINST THE REAL AND ALLEGED BAD RESULTS OF VACCINATION.

Schlossmann (Dresden) advocates that the teaching and the examination in the science of vaccination be given over to the pediatrist; that the lymph be free from germs; that vaccination be carried out with sterilized instruments on a clean arm; that the vaccination pustule be protected against secondary infection by a bandage (boric acid mull); that vaccination be not undertaken in the hottest season of the year; that the number of children vaccinated be limited at each term; that a room for the particular purpose of vaccination be available; and that the vaccinated be examined on the tenth to the twelfth day after vaccination.

Discussion—Soltmann believes it to be both difficult and unnecessary to take the instruction on vaccination out of the hands of the hygienic expert and hand it over to the pediatrist. He had never met with bad effects from vaccination. The examination of the pustule should be done on the tenth to the thirteenth day. In Summer, a bandage seemed to him to be rather harmful than beneficial.

Lange condemns the bandage after vaccination, and deems the influence of great heat and of perspiration not dangerous to the vacine pustule. He has not met with any bad effects of vaccination within the past five years.

v. Holwede condemns the boric acid bandage, and recommends the application of dry powders.

Ritter thinks celluloid bandages very appropriate.

v. Holwede has observed that under the latter, especially, great moisture is developed.

SPINA BIFIDA, WITH PERFECT DIVISION IN TWO PARTS.

Theodor (Koenigsberg) says: The child, two days old, was born with a fluctuating spina bifida in the region of the last lumbar vertebra, of the size of a potato, of a dark blood-red color. On evacuating the sac, a strongly albuminous fluid was obtained. Injections of a 0.02% solution of corrosive sublimate, as well as the operation, proved futile. Death occurred on the fifteenth day. Section disclosed already macroscopically a great enlargement of the spinal cord, and a division in the median line into two equal halves of the spinal cord cylinder. This duplication into two perfectly-developed spinal cords, originated in the neighborhood of the third lumbar vertebra, and gradually became one by the intervention of certain structures, whose nature in this case has not yet been determined. The spinal cord was cut into 1,650 sections, stained after Weigert, and examined. The microscopic examination, which was facilitated by excellent preparations, confirmed the macroscopic finding that T. was dealing with a duplication of the spinal cord. The author dwells on the fact that this congenital anomaly is an extraordinarily rare one, and that the duplication could only have occurred by a division of the original single spinal cord, and its equal or unequal division by cartilaginous or ligamentous partitions.

A CASE OF HYDROCEPHALUS TREATED BY LUMBAR PUNCTURE.

Baumeister (Braunschweig), presented the following case: The child was about five months of age, which, anterior to treatment, showed marked symptoms of hydrocephalus, and from whom was removed, at intervals, small quantities (15–30 g.) of lumbar fluid for therapeutic purposes. B. is positive that he has noted already, after the second removal of fluid, that the shape of the head, as well as the intelligence of the child, had improved, and therefore recommends the gradual removal of small quantities of lumbar fluid in the treatment of hydrocephalus.

Discussion—Lange mentioned that a seeming improvement of hydrocephalus, also takes place at times without treatment.

Soltmann has not seen any good results either from lumbar puncture, nor from any other measure in hydrocephalus, for the rest of the operation in itself, even when large quantities of fluid were removed, was perfectly harmless.

Bendix related a case of hydrocephalus which had been treated in the Charité for about one year by iodide of potassium, and which had improved so much that the child, when about three years of age, made attempts to stand and walk. The circumference of the head had diminished, and the face had come more to the foreground in contrast with the colossal size of the head. Intelligence had so far improved that the child was able to speak certain words—could say good day, ask for the watch, etc.

Langner had observed temporary improvement in hydrocephalus after lumbar puncture, but never any permanent benefit.

A CONTRIBUTION TO THE STUDY OF SALAAM CONVULSIONS.

Lange (Leipzig) has observed four cases of spasmus nutans during the last four years. Three of these were girls, respectively eight months, 2 years, and 7 years of age; and one a boy 11 years old. In the infant, a cure was obtained by means of phosphorus treatment within three months. The other cases, however, continued for two, five, and eight years, in spite of all treatment. A singular fact in two children was that the attacks only occurred after vomiting. The three older children all suffered from epilepsy, some only since a short time. With this there was present in two cases a more or less greater degree of idiocy, the oldest child remaining perfectly intelligent. In two cases, nystagmus had never been observed. L. discusses the pathogenesis of the convulsions. The so-called accessorius spasm of the text-books is not such in reality, as the muscles supplied by the accessory nerve, the sternocleido-mastoideus, and cucullaris, are not at all involved. The nodding is caused by clonic contractions of the musc. recti anterior capitis, the musc. longus colli, and when the thorax is fixed by the scaleni muscles. In one case the pectoral muscles were also involved. He thinks, too, that we have to deal in older children, perhaps also in infants at the breast, taking into account especially those cases which are complicated by epilepsy, as a rule with some central disturbance, either of a transitory or permanent form. They may, perhaps, be present direct cortical changes. The designation, accessorius spasm, should therefore be dropped.

Discussion—Pott deems it likely that in many spasms of this kind, hysteria plays an etiological rôle. He is not prepared to look upon it as a grave cerebral disease.

Hochsinger lays stress on the fact that with the exception of Lange's cases, the nodding spasm is always accompanied by rhachitis. The favorable influence of phosphorus is not to be denied.

Soltmann: There exists, without doubt, an essential salaam convulsion, which stands in no relation to rhachitis, but intestinal disturbances have been observed in these cases. The continued essential spasm is rare, and nearly always incurable. The frequency of the morning attacks may be explained as being reflex, and caused by the lifting of the child out of its bed.

v. Holwede corroborates, in accord with Hochsinger, the occurrence of nodding spasm in rhachitis, and calls attention to the movements of these children, which are characterized by the to and fro swaying of the upper part of the body, resembling that seen in caged animals. Masturbation could be excluded in the cases observed.

Soltmann does not look upon these movements made by the children sitting in bed as spasms, but as instinctive compulsory or impulsive movements, whose cause may be found in the wanting of something. They usually cease at once when the wishes of the child have been gratified (desire to urinate or to defecate, thirst, etc.)

Lange admits hysteria as an etiological factor. As nearly all cases seen at the policlinic are rhachitic, the latter ought not to be dragged in as an etiological basis for every disease.

Henoch refers the to and fro movements of the child back to onanism. The cerebral seat of the disease, he believes, therefore, as being probably in the cortex, as a nodding centre has been demonstrated by French authors.

Der Kinderarzt 1898, ix. 24.

LOCAL ANESTHETIC.

℞	Orthoform, pulv	2.0–4.0
	Lanolin	15.0
	Vaselin	5.0

Mft. Ungt. D. S.—For external use in rhagades, ulcerations, burns of all degrees.—(*Munch. Med. Woch.*)

FISSURE OF THE TONGUE.

℞	Acid carbol	1.5
	Tinct. iod	5.0
	Glycerine	15.0

M. D. S.—For local application with a camel's hair brush.—(*Monatsh f. Dermatol*).

OPHTHALMIA GRANULOSA.

℞	Guaiacol	1.0
	Glycerine	100.0–200.0

D. S.—To be dropped into the eyes.—(*Rev. de Thérap*).

IMPROVED COD LIVER OIL.

℞	Ol Jecoris asell	100.0
	Saccharin	0.4
	Ether acetic	2.0

M. D. S.—Two or three coffeespoonfuls daily.—(*Med.-chirurg Rundschau*).

PIGMENT SPOTS.

℞	Hydrarg bichlorid	0.5
	Sacchari	15.0
	White of egg	0.1
	Succ. citr	30.0
	Aq. destill	150.0

M. D. S.—To be applied in the morning and allowed to dry.—(*Medic*)

A CYSTIC ENCHONDRO-FIBROMA AND A CONGENITAL SARCOMA OF THE UPPER THIGH.

F. Koenig (*Vereinsbeil der Deutschen Medic. Wochenschr 1898, xxiv., 12*). The patient exhibited is a female now 16½ years of age, who was operated on by v. Bergmann a year and a half ago for a very extensive cystic enchondro-fibroma of the upper thigh. The tumor, which embraces about one-third of the whole femur, leads to the typical bone cysts,of which a number of marked cases have been described by Schlange. They have their seat on the upper thigh, always immediately below the trochanter major in children or adolescents, slowly bend, and at last fracture the bone. They may, however, go on to healing, with a preservation of the continuity of bone, by excretion of the local disease products, accompanied by more or less tumor tissue. The patient has also experienced pain in the right leg since 13 years of age, at first limping, and a year later tumefaction of the upper end of the thigh bone setting in. A fall on the hip caused her admittance on September 5, 1895. At that time there was excessive tenderness; great tumefaction from above the trochanter to the middle of the femur; the limb was shortened 2–3 cm.; crepitation was elicited just below the trochanter. After the swelling had subsided under an extension splint, and the fracture had become united, there presented a permanent enlargement, which extended from the trochanter to about the border of the upper and middle third, the portion below the trochanter being greatly enlarged, and protruding with a convex surface containing some soft portions scattered through the general hard mass where the tissue, otherwise of bony hardness, could be somewhat depressed, and gave a sense of fluctuation. Judging from the cases above mentioned, the possibility of a benign tumor of the femur with cystic formation, which had led to a fracture, was thought of. Accordingly the operation was arranged. A longitudinal incision over the trochanter was made, and the periosteum was peeled off from the very extensive bony shell. The convexity situated highest was removed with the chisel. Within the bone a number of cysts, most of which contained some bloody serum, surrounded by a greyish-white solid swelling, replacing the bone-marrow for a long distance, were at once opened. The outer surface showed the fracture healed in dislocation; large masses of callus at some places. Partly by subperiosteal resection, partly by local extirpation, all morbid matter was removed, until at last there remained, for a great distance from the neck of the femur to the head and to the border of the middle third, only the periosteum in continuity, here and there some bony shells being left. The wound was tamponed with iodoform gauze. Healing, with consolidation, took place in a short time. After two and a half months the girl was discharged cured, with a shortened limb, a deformed and thickened thigh from the old and newly-formed callus remaining. The specimen is histologically a fibroma, more or less rich in cellular elements. The cysts, through hemorrhages and softening in the body of the tumor, have also appeared where their external branches are only covered by a bony shell. The most interesting portion, however, are a number of small, lentil-sized islands of hyaline cartilage, which presents, microscopically, the condition exactly of epiphyseal cartilage of the child. The changes of endochondral ossification, are, of course, not much further advanced than to a provisional deposit of lime; bone has not been formed. The enchondromata in the cartilage originate, according to Virchow, from such cartilaginous islets, which remain behind chipped off from the epiphysial line, especially in the irregular ossification of rhachitis; once isolated, they continue to grow. This finding would therefore be another corroboration of the view that these benign bony growths owe their origin to an irregular development of the growing bones. Thus an explanation would at the same time be given why they cease to grow when these parts are removed.

The other specimen demonstrates a congenital sarcoma of the thigh in its upper third, which was observed in a child at the Koenigliche Klinik from the day of birth to its death, and which was at the same time afflicted with a hare-lip and fissure of the palate, and possessed a Meckel's diverticulum of the small intestine. The tumor, which had led to a fracture, has also been reproduced by a well-made skiagraph. This tumor had also led to an absorption cyst, but is to be classified, according to its histological character, as a sarcoma. Remnants of cartilage were not found.

The tumor therefore shows an undoubted etiology as a developmental defect of the embryo. More cannot yet be said. The comparison of these tumors, however, is interesting, as they demonstrate that in both cases the cause of their formation should probably be looked for in disturbances of the normal development of the tissues—in one case, in utero; in the other, in the bone of the young girl during the maximum of growth.

YOUNGSTOWN, O., March 16, 1898.

To the Editor of PEDIATRICS:

DEAR SIR,—In the issue of March 1, there appeared an article from Dr. H. N. Potter, of Burlington, Vt., with the following title:

"Can Tardy Hereditary Syphilis of the Bone be Successfully Treated by the Inoculation of Measles?"

I wish to offer the following criticism of Dr. Potter's paper in good faith and with fraternal regard:

I doubt very much after reading the Doctor's description of the case, that he has a case of tardy syphilis in the patient described.

The clinical history and progress of the case as given by Dr. Potter, impresses me very forcibly as being a case of tubercular bone disease, or possibly a case of osteo-myelitis.

It has not been proven to the satisfaction of all pathologists that syphilis can even be transmitted from father to child except through the medium of the mother's blood. How much more unlikely, then, is it that Dr. Potter's patient is suffering from syphilis transmitted from so remote an ancestor as a great-grandfather.

In making our diagnosis in any case, we should first be certain that we can exclude the commoner pathological conditions; and so continue until we are reasonably sure of our ground. If Dr. Potter will look carefully over his notes of the case, and consider more in detail its clinical picture, I feel certain that he will see the force of my criticism, and be ready to admit that he was mistaken in his conclusions. I think we are wrong according to modern pathological teaching if we charge more to ancestry than the responsibility of a weakened resistance.

When Dr. Potter has demonstrated beyond reasonable doubt the injustice of my criticism, then we will be ready to discuss the main point in his paper.

Very truly,

6 North Champion Street. H. E. WELCH.

Preliminary Programme of the Section on Diseases of Children of the American Medical Association, at Denver, Colo., June 7-10, '98

1. Address of Chairman.........J. P. Crozer Griffith, Philidelphia, Pa.
2. The Influence of Dystocia in the Causation of Infantile Diseases......................Joseph Eve Allen, Augusta, Ga.
3. Thyroid Treatment in Early Myxedema and Cretinism in Young Children.............Frederick Bierhoff, New York City
4. Blood Examinations in Pediatric Practice..S. E. Woody, Louisville, Ky.
5. Of the Value of Eye Symptom in Meningitis............... ....A. Edward Davis, New York City
6. Some Additional Researches on the Poisons found in Milk and Milk Products........Victor C. Vaughan, Ann Arbor, Mich.
7. Tubercular Arthritis in Children..........John Ridlon, Chicago, Ill.
8. Some Skin Eruptions which are Confounded with Infantile Syphilis... ....Charles W. Allen, New York City
9. Preventive Treatment of Tuberculosis in Children with Hereditary Pre-disposition ......John A. Robinson, Chicago, Ill.
10. Fracture of the Clavicle in Children—with especial reference to treatment by a modification of Sayer's method—in over 200 cases...............A. Ernest Gallant, New York City
11. Discussion of above..................Charles Powers, Denver, Colo.
12. Whooping Cough.....................R. B. Gilbert, Louisville, Ky.
13. Eczema in Four Branches of a Family...Ella M. Patton, Quincy, Ill.
14. Report of Some Odd Results in the Treatment of Diptheria with Antitoxin.......Henry Anthony Strecker, Philadelphia, Pa.
15. Influenza in Children..........James J. Concannon, New York City
16. The Treatment of Congenital Infantile Syphilis........... ....Charles S. Shaw, Pittsburgh, Pa.
17. Mechanical Management of Difficult Defecation in Infants.................Thomas Charles Martin, Cleveland, Ohio
18. Subnormal Temperature in Infectious Diseases............. ....Henry H. Fround, Philadelphia, Pa.
19. The Influence of the Climate of Colorado on Diseases of Children.................C. F. Gardiner, Colorado Springs, Colo.

20. Tetany in a Child 18 months old..Edward H. Small, Pittsburgh, Pa.
21. Tetany in Infancy..................J. Lovette Morse, Boston, Mass.
22. Pneumonia—Laborde Treatment of Artificial Respiration..............................A. E. Roussel, Philadelphia, Pa.
23. Clinical Studies of Multiple Neuritis in Young Children............................Annie S. Daniel, New York City
24. The Treatment of Tuberculosis in Children in N. Y. City—Remarks based on ten years' experience, Louis Fischer, N. Y. City
25. The Treatment of Congenital Talipes..Harriet E. Garrison, Dixon, Ill.
26. The Debility of Adolescence, Louis Faugeres Bishop, New York City
27. Discussion of Intubation and Diphtheria.................. ....Solomon Solis Cohen, Philadelphia, Pa.
28. The Diagnostic Value of Tuberculin, Dillon Brown, New York City
29. Some New Facts Concerning Scarlet Fever...... ....Joseph William Stickler, Orange, N. J.
30. Formative Nutrition.........H. W. Scaife, A.M., M.D., Chicago, Ill.
31. Tuberculosis of the Iris...................................... ......A. G. Thompson and Samuel J. Cittelson, Philadelphia, Pa.
32. Tubercular Peritonitis.............F. F. Lawrence, Columbus, Ohio
33. Cyclic Vomiting in Children..Charles Godwin Jennings, Detroit, Mich.
34. Auto-Infection vs. Typhoid Fever as seen in Young Children.........................N. C. Hollopeter, Philadelphia, Pa.
35. Discussion in Diphtheria and Tubercular Diseases...... ....Edwin Klebs, Chicago, Ill.
36. Data derived from 100 cases of Laryngeal Diphtheria, including 45 intubations................Rosa Engelmann, Chicago, Ill.
37. Management of Infectious Diseases in Children.......... ....I. N. Love, St. Louis, Mo.
38. Is the Use of the Term "Typhoid-Pneumonia" Justifiable? A case in point..................Henry E. Tuley, Louisville, Ky.
39. Neurotic Purpura............Francis A Thompson, Milwaukee, Wis.
40. Mortality in Children, due to neglect, for which the Physician is responsible.......................W. A. Dixon, Ripley, Ohio
41. Dentition.......................Joseph Clements, Kansas City, Mo.
42. Observations in Diphtheria........N. D. Jerowitz, Kansas City, Mo.
43. Demonstration in the Method of Auscultation and Percussion for Heart and Lungs.........Herbert B. Whitney, Denver, Colo.
44. Discussion of Dr. Whitney's Method.......J. N. Hall, Denver, Colo.
45. ————......................John H. Musser, Philadelphia, Pa.

46. ——————.....................James C. Wilson, Philadelphia, Pa.

47. ——————..................J. P. Crozer Griffith, Philadelphia, Pa.

48. What Influence Do Stimulants and Narcotics Exert on the Development of the Child.............E. Stuver, Rawlins, Wyo.

49. Gastro Intestinal Chloroform Diarrhea..................... ....Edward L. David, Louisville, Ky.

50. The Diagnosis and Treatment of Inherited Syphilis..... ....E. C. Davis, Atlanta, Ga.

51. Discussion on Intubation and Diphtheria, Robert Levy, Denver, Colo.

52. Serum Treatment of Diphtheria as Viewed by the General Practitioner during the last year....A. McAlister, Camden, N. J.

53. Milk Food in Infants...........Edwin Rosenthal, Philadelphia, Pa.

Papers and Discussions are promised by: W. H. Wells, Philadelphia; Janet Gunn, Chicago; A. K. Bond, Baltimore; S. S. Adams, Washington; J. Madison Taylor, Philadelphia; H. M. McClenahan, Omaha; C. S. Herriman, Kansas City; A. H. P. Louf, Philadelphia; Harold N. Moyer, Chicago; George C. Potter, St. Joseph; Edmund J. Roger, Denver; Martin W. Barr, Elwyn, Pa.; J. M. C. Carter, Waukegan; C. D. Spivak, Denver; W. H. Gray, Bridgeport; D. A. Hodghead, San Francisco; Avis E. Smith, Kansas City; A. C. Cotton, Chicago; Clifton Scott, Des Moines; W. S. Christopher, Chicago; J. A. Larrabee, Louisville.

Sudden Deaths Occurring in Intubations

I am preparing a paper on "Sudden Deaths Occurring in Intubations," and desire to collect as many cases as possible. Will you kindly aid me by replying to the following questions:

1. How many intubations have you performed?
2. How many sudden deaths in primary intubation? Subsequent?
3. In how many cases was immediate death threatened?
4. What do you assign as the cause of such results?
5. What measures have you adopted in treating the same?

Unless otherwise directed, I shall take the liberty of using your name in the tables.

Thanking you in advance for the favor of a reply, I am, very respectfully yours, George W. Crile, M.D., 275 Prospect Street, Cleveland, Ohio.

Professor Dr. Bagnisky was misquoted in our issue of January 15, 1898, page 79. Our abstract said that Karewsky protested against the removal of the omentum, as advocated by Bagnisky; and it should read that both Bagnisky and he protested against the removal of the omentum.

PEDIATRICS

VOL. V. APRIL 15th, 1898 No. 8.

ORIGINAL ARTICLES

ON INFILTRATION ANESTHESIA.

By DR. CARL LUDWIG SCHLEICH,
Berlin.

IN 1891 I began my studies on the effects of various soluble substances on the nerve papilli of my own skin and of that of my assistants. My reason for making these experiments was the relative frequency of cases of poisoning—though but of short duration and slight intensity—among those of my patients who had been operated upon under the method of producing cocaine anesthesia then in use. At that time, out of ten operations, it was common to meet with from five to eight cases of slight symptoms of dyspnea, jactitation, palpitation of the heart, and collapse. Although none of these were sufficiently well marked to be alarming, they existed as disturbing sequences of local anesthesia, which it was my hope to avoid. My experiments were directed toward finding, if possible, a method of employing cocaine in combination with other substances which would be free from these annoying and not always dangerless after-effects.

For this purpose it was necessary to determine the minimum of action of this anesthetic "par excellence," and this could only be done by experiments upon human beings, those upon animals furnishing—as is so often the case in the more delicate questions of nerve physiology—only uncertain and approximate results. I decided, therefore, to inject the substances to be examined *into* not *under* the tissue of my own cutis, in order to study their effect on the delicate and sensitive nerve-papilli. The result was surprising. We found that solutions of cocaine 100 per cent. weaker than the usual strength (2 to 5 per cent.) produced complete anesthesia and analgesia within the area of injection, and also that, apart from a slight burning sensation at the moment of injection, distilled water alone could produce complete anesthesia and analgesia within the wheal.

As the result of further investigations, we discovered the important fact that the physiological chloride of sodium solution exercised no influence whatever upon the sensibility of the skin saturated with it, but that, on the other hand, a 0.2 per cent. solution of chloride of sodium produced complete anesthesia of the wheal without noticeable sensation at the moment of injection. A combination of the solution of chloride of sodium (0.2 per cent.) with cocaine resulted in the discovery that dilutions of cocaine of 1 to 10,000, which could not have been injected painlessly in combination with water, produced complete anesthesia when injected into the wheal in combination with the chloride of sodium solution.

I wish here to state briefly that a great number of compounds, such as methylviolet, caffeine, carbolic acid, antipyrin, etc., will produce as complete an anesthetic wheal as does cocaine and chloride of sodium; and that even morphine in almost homeopathically small doses possesses this power, notwithstanding the universally accepted teaching to the contrary.

My experiments demonstrated the fact that a focus of anesthesia could not be produced by the cocaine solutions containing 2 to 5 per cent. of cocaine up to that time in use, because the limits of autointoxication of from 0.05 to 0.08 were reached too soon; and further, that by means of so considerable a reduction of the strength of the anesthetic and a corresponding increase of the quantity employed, the cocaine anesthesia might assume unlooked for proportions. Briefly: I found that with my solutions of 1 to 1,000 or 1 to 5,000 I could anesthetize a far larger area of the body without reaching the limit of intoxication than I could with dilutions of 2 to 100 or 5 to 100.

The outlook was very encouraging, since it promised to make narcosis unnecessary in a large number of cases. However slight we may deem the danger of narcosis, no one will deny that at the very least it is attended with disagreeable consequences which it is to the interest of both physician and patient to avoid. I have made it a rule never to perform an operation under narcosis which can be done under infiltration anesthesia. If we compare those cases which have been operated upon under narcosis, although with the greatest technical skill, with those done under infiltration anesthesia, we can feel no doubt as to which of them is preferable. Of course, thorough knowledge of the téchnique of the process must first be acquired. It has been my habit to fully demonstrate my method to all my students, among whom I have always been happy to find many American physicians, and I avail myself of the opportunity to describe here some of the technical points which seem to me to be of the utmost importance in the practice of my method of producing anesthesia.

The technical process is always the same, viz., the formation by means of my solutions of an artificial edema of the whole area within which we are to operate. The entire surface should, if possible, be saturated with the solution in order that the operation may be completed without further injections. It is above all things essential to make the first experiments in healthy tissue; only by this means can success be attained in completely anesthetizing inflammed tissue.

For example, take the cases of an atheroma and of a foreign body. The first may be located in the scalp, the latter a splinter of steel which has penetrated deeply over the styloid process through the soft parts into the bone.

First let us consider an atheroma the size of an apple. After cleansing and shaving, I begin by applying ethylchloride to every part of the convex-shaped tumor, following the line of intended incision. A portion of skin of the size of a bean becomes white and freezes. Into this frozen area the needle of a syringe containing five grams of solution No. 2 (see formulas given later on) is introduced horizontally as far as the top of the opening of the cannula, so that the point of the needle rests under the cutis without penetrating into the fatty tissue. If I may now press the piston of the syringe, allowing the fluid to flow beneath the skin, there is formed an anemic, slightly raised focus of injection called the "wheal," which may be increased to any size by further pressure on the piston. When it has attained the size of a flea-bite, I withdraw the syringe and re-insert it at the periphery but still within the area of the wheal, a little further in the direction of the intended incision, and again allow the fluid to flow. In this way the original wheal is extended in the line of the intended incision, the needle being repeatedly withdrawn and reinserted until the anesthetized area corresponds in size to the skin covering the tumor. All folds of the skin caused by the stretching of the tumor must be smoothed out as much as possible, so as to allow the advancing fluid to penetrate a little beyond the fold of the skin into that part which is not elevated. The superficial area of incision thus prepared, the anesthetizing of the subcutaneous connective tissue is accomplished by advancing the needle, under continuous flow of the anesthetic, from the anterior to the posterior part of the tumor beneath the skin down to the periosteum. It does no harm if the needle encounters the resistance of the bone. Five grams of the fluid equally distributed on all sides into the connective tissue around the tumor are sufficient. In the same manner, the fluid must be injected from the top on all sides between the skin and the tumor. Great care must be taken not to inject it directly into the contents of the tumor, because in that case increase of pressure in all directions may cause pain. By producing edema of the tissue between the skin and the contents, the whole tumor becomes anemic-white and can be incised and enucleated.

If these technical rules are observed, the operation may be painlessly performed at once. Should pain be felt during extirpation of the tumor, more fluid must be injected through bent needles around the tumor and under its base, until enucleation can be be performed without the slightest pain.

In our second example, a small wound my be perceptible above the styloidus processus radii. The patient, we will say, describes the splinter of steel as about an inch long and as thick as a match, but it cannot be felt through the skin. After thorough cleansing of the surrounding parts, a wheal is formed about 3 cm. above the wound. The needle is inserted, under continuous flow of the anesthetic, as far as the periosteum. With the needle pressed firmly against the bone, about five grams of the fluid are injected, the needle being gradually advanced along the bone as far as the area covered by the wound. Consequently, from this first wheal the subcutaneous connective tissue is permeated with the fluid to about the size of a walnut, and finally also the skin in the line of the wound and around it is endermically saturated.

A cut is now made directly to the periosteum. The wound line is in the direction of the edge of the styloid process, somewhat toward the dorsal part. For this reason, one longitudinal incision is not sufficient; in order to afford space enough, a second T-shaped incision must be made transversely to the line of the wound. This is done after forming another line of wheals perpendicular to the first, beginning at the anterior edge of the skin and reaching the point where the foreign body is assumed to be lodged. If the incisions are made in the manner indicated, it is a simple matter, by means of sharp hooks, to obtain sufficient space to determine the location of the foreign body. If the latter has penetrated under the periosteum into the bone, a section of the periosteum and the lamellæ may be infiltrated by renewed firm pressure of the cannula against the substance of the bone, and repeated pressure of the piston. There is no doubt as to the possibility of introducing a sufficient quantity of fluid through the Haversian canals into the substance of the bone. Experiments with methylviolet solutions upon the cadavar and hundreds of experiments on living beings, have proved the truth of this theory.

If we completely inject a bone like the metacarpus pollicis with infiltration solutions and saturate it with fluid in a line perpendicular to its line of direction, by means of firm pressure, we invariably find at the succeeding resection or amputation that entire painlessness results from the artificial edema of the marrow of the bone which has been generated by the periosteal infiltration. Experiment easily proves also that slightly colored solutions can be infiltrated beneath the periosteum through the bony covering into the narrow. Briefly: It is possible so to anesthetize by infiltration the *substantia eburnea* of a bone that a foreign body can be painlessly removed from the bony covering. I have successfuly removed a large number of such splinters, needles, balls, nails, etc., and always with the consent of my patient. The sutures can ordinarily be made without renewed infiltration, the duration of painlessness being more than twenty-five minutes.

For a final example, we will take a furuncle in the neck the size of a walnut, in order to illustrate its anesthetization for the purpose of excision of all morbid parts. It is much more difficult to anesthetize an inflammed area, because of the larger space which it is necessary to infiltrate. On the other hand, the injection is more likely to be successful on account of the larger size of the lymphatic ducts in hyperemic portions of the body. The furuncle which is to be operated upon may be located in the back of the neck. To produce anesthesia we use solution No. 1 (See end of article), at least for the first injection. The spray should be applied to the healthy skin for a space at least three finger widths in extent beyond every part which is inflammed and reddened. At first—as in every case—a wheal should be produced. Through this the needle is introduced directly under the base of the furuncle and pointed towards the fascia and the sheath of the muscle, but under no circumstances should it be allowed to penetrate into the pus focus itself.

Injection of five to eight grams of solution No. 1 beneath the base of inflammed tissue is made for the purpose of flooding the under part of the mass of extremely hardened tissue with the anesthetic fluid, so that those nerves which run backward through the *bottom* of the diseased tissue can be primarily excluded. Only experience and a thorough pathological knowledge of the individual character of each case can teach us when this point is reached. When this flooding of the under part of the tumor has been properly done—and only then—the first wheal is raised, and gradually the whole surface of the furuncle is saturated with the anesthetic fluid. Afterwards the soft central core may be edematized with solution No. 2.

Cross incisions may now be freely made, and all the involved parts excised. In case pain attends the filling of the cavity with the fluid, injections of solution No. 1 should be repeated until increase of pressure within the inflammed focus no longer produces pain backward through the base. The surgeon who performs many dozens of such operations, as the author has done, gradually acquires by practice such skill that in every case we can produce complete anesthesia at the first attempt.

As to the utility of my method, there can no longer exist any doubt, since such notable authorities as Miculicz, von Bruns, Prof. Bier, E. von Bergmann and von Hecker, have written in favor of it in Germany. Personally I am convinced, however, that according to the individuality of the operator, some will be more inclined to adopt my method than others. Even though we may not reach a final conclusion as to the limits of its application, the time will soon come when no one will be able to operate by any other method. Everyone who begins his studies with simple cases and acquires a certain technique with them before he undertakes more complicated operations, will soon discover that this method is a most decided step in advance in the art of operating without pain and danger.

This is, then, essentially the basis of my method. It is quite evident that this necessitates an entire change from the hitherto employed method of producing anesthesia which was founded by M. Réclus (Paris), its honored master, for the reason that it demands a different formula for each operation. In this change of technique, which naturally must be carefully acquired, lies one of the principal obstacles to the rapid adoption of my method. I have gladly availed myself of the privilege of seeing for the first time one of my articles published in an American journal, and to most gratefully acknowledge that it it was by American colleagues, especially Drs. Würdermann and Parvin, that my method was first submitted to an exact and practical test. I desire to take this opportunity of thanking those gentlemen most sincerely. It was in consequence of their American publications that my method was in extensive use in that country before it had attracted any notice in my native land. To my American colleagues I am indebted even for the favor which it won later in Germany from many prominent medical authorities. Their service to the advance of science is, for that reason, as great as my own.

In spite of all the opposition of my German colleagues, I persevered, and transformed the technique of local anesthesia.

The following are my three solutions for infiltration anesthesia:

	No. 1		No 2		No. 3	
Cocaine hydrochlorate	0.2	3.09 grs.	0.1	1.55 grs.	0.01	0.155 grs.
Morphine "	0.025	0.386 "	0.025	0.386 "	0.005	0.0772 "
Sodium chlor. steriliz'd	0.2	3.09 "	0.2	3.09 "	0.2	3.09 "
Distilled water *ad*....	100.0	3.2 oz.	100.0	3.2 oz.	100.0	3.2 oz.

SEBORRHEAL ECZEMA.*

By JOHN EDWIN HAYS, M.D.
Professor of Anatomy and Dermatology in the Hospital College of Medicine, etc., Louisville, Ky.

THIS patient, R. S., a female, aged 6 years, was before us last week. You will observe she was a well-marked case of eczema involving the scalp and face. She was brought to us with the history that this trouble had existed a year and a half, first appearing on the skin just back of the neck, then spreading over the scalp and face. The present condition has existed for about three months. The lymphatic glands at the back of the neck are very much enlarged.

You will find that this trouble is one which will be frequently met with in practice, and to cure it quickly will make you quite a reputation, for it is a disease which tends to perpetuate itself, very few cases getting well spontaneously. You will find that eczema is a disease which is confined to no certain spot or region, but it may attack any part of the body. You will find, however, that eczema has a marked predilection for certain parts of the body, *e. g.*, the face, head, scalp, flexor surfaces of joints, etc. In childhood, particularly, the disease frequently shows itself about the head, scalp or face.

The characteristic point about the disease is illustrated by the case before us. The disease first made its appearance between the ear and the scalp; this is one of the favorite sites for eczema to commence, and from that point the disease will spread over the face and scalp.

You will remember that the definition of eczema which I gave you at the beginning of the session was that of Unna "A chronic parasitic catarrh of the skin." I use the word catarrh, for you will observe always in cases of eczema that there is more or less exudation of serum either upon the surface of the body at the affected site or within the deeper layers of the skin, the serum in the latter case being prevented from escaping by the horny layers of the skin. To get a correct idea of the disease you must associate with it moisture. There are many points of similarity between catarrh of the the skin and that of the respiratory or the intestinal tract. An exudation of serum occurs in the skin or the deeper layers of the skin, at some time during the attack. You will not find moisture present at all times in every case, but if you will investigate carefully you will find that at some time during the period of the disease moisture will be present. It is true we have cases of eczema in which moisture does not occur on the surface, at the same time there is considerable exudation going on between the layers of the skin producing a certain degree of thickening and stiffening which can be observed by pinching up a piece of affected integument between the fingers.

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*Clinical Lecture delivered at the Hospital College of Medicine.

Many authors, particularly the older ones, taught that eczema was dependent upon some constitutional condition, some peculiar inner state; that eczema was simply an expression of some underlaying constitutional condition, consequently it was supposed that the disease was the result of a certain dyscrasia, like acute rheumatism, etc. That idea is still held by some writers on skin diseases, especially in England and in France, who use diathesis and dyscrasia to a certain extent to explain the causation of many of these troubles. But in Germany, and particularly in Vienna, a number of years ago Hebra proclaimed the fact that eczema was purely a local affection due to external irritation, and that view has been almost universally adopted by the profession of Germany. Unna went further than this and insisted that the disease was due to a micro-organism, consequently he classified the disease as a chronic parasitic catarrh of the skin, in other words a superficial chronic imflammation of the skin, microbal in its origin.

If you examine this patient, you will see the parts affected present a very red color, in fact the typical signs of chronic inflammation; redness of the skin, heat, more or less swelling, and some pain. I will state that the pain of this form of trouble is more or less substituted by another symptom which we call itching; in fact, itching is the most troublesome of all the secondary symptoms of eczema. You will also find that the symptom does not appear in proportion to the extent of the disease; in some cases of eczema in which you will naturally expect little itching, you will find most. In erythematous eczema in which you have no break in the skin, you will find itching exceedingly intense due to the exudation of serum which has taken place into the skin causing pressure upon the terminal sensory nerve filaments. In the variety before us there is very little itching; we have a raw surface, which is constantly oozing serum, involving the face and anterior half of the scalp. It has improved very much since we began treatment. The only point not involved in this process is a little spot on the upper lip. Our treatment has been simply local.

The primary lesion of eczema varies greatly. It was formerly thought the anatomical lesion in every case was a vesicle. That was the view promulgated by Tilbury Fox, of London, and also by other English dermatologists; they claimed that there could not be a case of eczema without a vesicle as the invariable anatomical lesion. Now we know that we have other primary lesions. We may simply have a red spot, an erythematous lesion, or we may have a papular or pustular lesion. Any one or all of these may constitute the primary lesion of eczema. A vesicle is probably the most frequent of all primary lesions, and the reason we do not sometimes discover the vesicle is that the vesicle itself is usually very small, its walls exceedingly delicate, consequently rupture most frequently occurs before the case comes under your care, leaving an exuding surface. This exudation is serum, which is taken from the blood. As I have told you, you have here the symptoms of inflammation, the pathological steps in the inflammatory process taking place just as they do in inflammation in other parts of the body. There is a vasomotor paralysis accompanied by a dilatation of the capillaries, a slowness of the blood current, and an exudation of the serum of the blood into the meshes of the skin. In the case before us the skin has been very much thickened on account of this exudation, although the child's cheek now is not as thick as it was a few days ago. At that time the skin was quite thick, but the exudation has been absorbed under the use of the remedy applied. The skin is beginning to assume a more healthy appearance and has a more healthy feel. If the mother will carry out instructions carefully, I have no doubt inside of two months this patient will be entirely well. She has been under treatment about five weeks. In carrying out the treatment, it is absolutely essential to avoid touching the affected parts with water. Water sometimes not only delays the cure of these cases, but absolutely prevents them from getting well. This point must be insisted upon. When it becomes necessary to cleanse the parts I am in the habit of advising an oily preparation containing a few drops of carbolic acid.

You may find this disease occurring in the healthiest types of children, and in my judgment there is no underlying constitutional state which can be regarded as the cause of the trouble. It is true, however, that some constitutional states may tend to make the disease more severe and more prolonged in its duration, but no constitutional condition can act as anything more than a predisposing cause, the exciting cause must be external irritation, and Unna has demonstrated beyond a doubt the presence of a micro-organism which he claims is the exciting cause of the disease. One feature that seems to bear out this statement is that the disease will not get well unless you employ some remedy in its treatment which is capable of destroying parasites. This is a very strong argument in favor of the disease being parasitic in origin. Some writers believe that the parasite is not the primary cause of the lesion, but claim its presence is a seconday effect, not the primary cause, but that the primary cause is always external irritation.

The treatment in the case before us has been the local application of the ammoniate of mercury, oxide of zinc, powdered starch and vaseline. I look upon that as a very efficient application for the cure of such cases. We have given nothing internally, because we think no internal remedies are indicated. We will request the mother to continue to strictly observe the rule about washing the affected parts. If this is carried out we feel satisfied that the disease will speedily subside under the local application mentioned.

One of the most troublesome points to be relieved, when affected by eczema, is just back of the ear, especially in the groove between the scalp and the ear. This is where the disease usually begins, and is the last point to yield to treatment. You will find in this trouble, as in other skin diseases, there is a tendency to recurrence, consequently after a case has been pronounced cured, the skin should be carefully watched, and everything which would tend to irritate the skin should be carefully avoided, consequently the frequent washing with water and especially the use of cheap varieties of soap should be prohibited. If any soap is used, it should be as nearly a neutral preparation as it is possible to obtain so as to cause the minimum amount of irritation to the skin. If proper precautions are taken, I believe the disease seldom recurs, although, as previously stated, there is always a tendency to recurrence like many other skin affections.

These cases should be relieved as quickly as possible. There is no danger of driving the disease into an internal organ, as has been claimed by some of the older authorities. That opinion originated largely from the fact that the disease was found difficult to heal, consequently the impression became more or less general that to heal it quickly would be likely to produce the same trouble in some internal organ. That, however, has been proven not to be the case. Many people think, though that there is such an intimate relation between the skin and the internal organs, that if you cure skin affection, involvement of the internal organs may supervene. While that may be true as regards some skin diseases, it certainly does not hold true in eczema.

EDITORIAL COMMENTS

Forecasting Sex

Professor Schenck either through his misfortune or fault has much to answer for. By the publication to the world of his theory that he is able to produce at will a child of either sex without giving proof of the efficacy of his methods, he has incited other members of the medical profession, induced, in it is to be feared, by the prospect of self-advertisement and by the hope of gain, to propound propositions of a like nature. To give, however, Professor Schenck his due, he is reported to state that the publication of his asserted discovery is premature and was not made by his wish. Until, therefore, the sealed packet which he has handed to the Vienna Imperial Academy of Science is read in the full, it will be best to reserve judgment. A Boston physician now claims that he has known how to produce boys at will for the past twenty-five years, but that he had refused to publish it for fear of the great harm it would do. Another American physician, a Dr. Wilbur Watson, of Danbury, Conn., has no such scruples, and boldly proclaims that he is able to control the sex of children. Unlike Professor Schenck, who it seems is in the main in accord with the generally received opinion of the influence of nutrition in the determination of sex, Dr. Watson holds that nutrition has nothing watever to do with the matter, but refrains from making public his important secret. Unless he has substantial and sufficient reasons for withholding his knowledge, his action in so doing is ill-advised. If, as he asserts, he is absolutely convinced of his power to control sex, it is hard to understand why he should not be willing to reveal his discovery, and if he has not the courage of his convictions, he had no right to allow himself to be advertised as possessing the knowledge. In regard to the determination of sex, it is estimated that at the beginning of this century there were about 300 theories, and doubtless since that time the number has largely increased. Geddes and Thomson in (Evolution of Sex) say that "throughout nature the influence of food is undoubtedly one of the most important environmental factors." According to Thury, an ovum fertilised soon after liberation tends to produce a female, while an older ovum will rather develop into a male. As a practical breeder, Thury claimed to determine sex of cattle upon this principle. Hoacker and Sadler were in favor of the generalization that when the male parent is the older the offspring are preponderatingly male, while if the parents be of the same age or if the male parent be the younger, female offspring appear in increasing majority. The experiments of Henson (which supplement and extend those of Thury) show that a very favorable condition of both ovum and sperum will tend to the formation of a female. To again quote Thomson and Geddes, "The best known and probably still most influential theory is that of comparative vigor statistics, seem to show that after an epidemic or a war, the male births are in a greater majority than is usually the case, and 'vice versa.'" The influence of maternal nutrition as a most potent factor has been shown by repeated biologic experiments. Scientists, until most convincing proofs have been given, will remain sceptical as to the power of any person to control sex, and will regard with doubt assertions to that effect.

Christian Science and Faith Healing

Christian Science appears to be held in in high repute in Massachusetts, judging from the opposition that an amendment to the laws regulating the practice of medicine in that State has evoked on all sides. The amendment in question was framed with the view of restricting the scope of medical quacks. Among the prominent men who protested in behalf of Christian Scientists and mind healers was Professor James, of Harvard College. He is reported to have said: "The mind curers and the public return the scorn of the regular profession with an equal scorn, and will never come up for the examinations. Their movement is a religious or quasi-religious movement; personality is one condition of success there; and impression and intuition seem to accomplish more than chemical, anatomical or physiological information." Nowadays, and particularly in this country, a wave of quackery is spreading, and unless means to stem its advance are promptly taken, it will engulf, or, at any rate, seriously damage the regular profession. The chief point in the argument of the opponents of the proposed amendment, appears to be that, if passed, it would be an invasion of the liberty of the people, and that a person who has arrived at years of discretion, has a right to resort to whatever means he may think fit, to restore himself to health. This contention, however, weak though it be, so far as adults are concerned, certainly does not apply in the case of children; they, at least, should be protected from the effects of the putting into practice the opinions of their parents or guardians. An instance of this was recently given in Kansas City, Mo., where a Mrs. Baird, science healer, was fined $50 and costs by the police court for causing a child to die of diphtheria without medical attendance. On appeal to the criminal court, the decision of the police court was sustained, and the judge said that if he had the power he would have raised the fine to a $1,000. This view of the case will strike most unprejudiced persons as the common sense one. The *London Lancet* even goes further than this, and referring to a similar occurrence a short time ago in England, remarks: "It is useless to point out to people of this cast of mind the falsity of their theological reasoning, but we do think that the legislature which takes care to prevent people jumping off the monument or going on ice too thin to bear their weight, might step in and prevent peculiar people and faith healers from murdering their children by neglect." Until the public has been educated or taught by bitter experience to see the error of their ways, the medical profession must fight their own battles and protect themselves in the best possible way against the methods of empiricism. Where the people at large can be convinced that legislation is necessary for their own benefit, they will approve it, but they will most assuredly take no steps to protect medical men.

Influenza in Children

Taking into consideration the prevalence of influenza, and the high rate of mortality therefrom among children, it seems somewhat curious that more attention is not paid to it as a complaint of childhood. The hospital says that one-fourth of all influenza cases occur among the young, and that the mortality reaches the high figure of about 30 per cent. When a child has an attack of influenza the process is as a rule much less sudden than is the case with adults. It becomes gradually dull, apathetic and weak, with accompanying catarrhal symptoms. The children most frequently affected are those from two to ten years of age. The initial stage begins with an atypical fever and with tendency to rigors. Sometimes there are nasopharyngeal catarrh, dyspnea, frequently infection of the conjunctiva and copious secretion of tears; with older children headache, convulsions and sleepiness, constipation is common. As with the adult the complications and sequelae of influenza are most to be dreaded. Capillary bronchitis is one of the most frequent, often followed by pneumonia, pulmonary edema or cardiac weakness. It is believed that the specific cause of influenza has been found in the secretion of the mucous membrane, but no specific remedy against the micro-organism has yet been discovered. Dr. L. Fuerst, Berlin (*Medecinal Zeitung*, 1897, No. 78), says since the larger epidemic of 1889–1890 and its re-appearance during the past few years, the knowledge of the specific germ, the various forms and complications as well as the estimation of its prognosis, has attained a higher standard. This, at first generally believed harmless sickness, but later observed, a dangerous disease, has in a similar manner been carefully studied and improved. Experience has taught us that during these epidemics more attention must be paid to the catarrhs of the respiratory tract so often complicating this disease, because we are at first unable to decide whether this complication is due to an infectious catarrh or the beginning stage of influenza. It is said that the epidemic of influenza which is now raging in many parts of Europe differs in its character from those of previous years. The fact that the disease may present at least three distinct types, has long been recognized. Sometimes it attacks most severely the respiratory, sometimes the nervous, and sometimes the digestive system. The present epidemic is remarkable for the very large proportion of cases, which show symptoms of profound disturbance of the digestive system.

Glycerinated Calf Lymph

Now that attention is being directed on all sides to the subject of vaccination, and especially ir regard to the quality of lymph used, the report of the investigations of Sir R. Thorne-Thorne and Dr. Copeman on the matter in many parts of Europe, comes à propos They have just returned from an official visit to the cities of Paris, Brussels, Berlin, Dresden, Cologne, and Geneva to inquire into the methods of preparation, storage, and distribution of glycerinated calf lymph in those places. In each of these, vaccination with calf lymph is habitual, and the investigations confirmed Dr. Copeman's experiments. He, it may be remembered, was the first to suggest an admixture of 50 per cent. glycerine, and concluded that the addition of glycerine to vaccine lymph, whilst it leaves the efficiency of the lymph undiminished tends to destroy other organisms. Glycerinated calf lymph is now exclusively employed in all the large cities of Europe, Paris alone excepted, there, to ensure confidence that the lymph is really calf and not humanized lymph, direct calf to arm vaccination is practiced among certain classes. In Berlin, the new mode of preparing and storing vaccine lymph is probably carried out most completely, and is thus described by Dr. Copeman: "Cow-calves from six weeks to three months old are exclusively used and are injected with one-half gramme tuberculin forty-eight hours before vaccination. They are fed on sterilized milk with eggs and corn flour. For vaccination the abdomen, from the vulva to the umbilicus and also the inside of the thighs are shaved. The skin is washed successively with soap and hot water corrosive sublimate solution (1 in 1,000) and with boiled water. The skin is dried, and with a blunt knife incisions hardly a quarter of an inch apart and about eighteen to twenty-four inches long, made on the surface of the abdomen, blood being removed with sterilized blotting paper. Stored glycerinated lymph is then poured on the abdomen and spread over the incisions with the back of a scalpel. Lymph is antiseptically collected on the fifth day, the skin being put on the stretch and scraped once only in the direction of the incisions with a sharp spoon, thus minimizing admixture of blood. The scrapings are mixed with a little water, passed twice between the rollers of a Döening Mixing Mill, water being gradually added to seven times the weight of the tissue removed. The mixture is then centrifugalised, the supernatuant fluid decanted off, and an equal weight of glycerine to that of the water, previously added, is mixed with it. The resulting lymph being put up in stock bottles or in small tubes." So much were the British commissioners impressed with the German system of preparing and storing glycerinated calf lymph, that they have recommended the English Government to adopt similar means. This is a step in the right direction, and if allowed in other countries should go far to remove the prejudice which undoubtedly at present exists against vaccination.

The Care of Dependent Children

The question of saving and properly bringing up homeless children is one of the greatest importance. It is also one surrounded with many difficulties. At one time orphan asylums and institutions of a like nature, were regarded as the most satisfactory, in fact as the only really efficient means of providing for the physical and mental needs of these waifs and strays. However, of late the evils of massing children together in large numbers has been fully recognized, and the more rational and healthy plan of placing them out in families has, in this country, been generally adopted. In England, where it must be said children are on the whole well looked after, the big institutions still flourish, although there are signs that their defects are becoming palpable to philanthropists both from a medical and moral point of view. In many of the States the placing-out system has been in force for a considerable time, and has been found to work well. In Michigan probably the results have been the most ecouraging. The *Sanitarium* for January says: "The practical operation of the Michigan State system for placing out dependent children is as follows: For general distribution throughout the State, the board of control issues a pamphlet circular explaining how children may be obtained from the State school, with instructions as to what is required of foster parents after they have taken children. The pamphlet contains a list with the post office address of all the county agents. Persons selecting children either by a visit to the school or by correspondence, are required to make an application on a prescribed printed form. This is sent by the superintendent of the school to the county agent of the county in which the applicant resides who visits the home of the applicant and reports upon its fitness and the truthfulness of the statements made in the application. If this report is satisfactory, the child is then delivered to the applicant upon sixty days' trial. Notice of the fact is then sent to the county agent. Should the child be returned to school, or should he be adopted or indentured, the agent is informed of the action taken." The Children's Aid Society, of New York, has also done excellent service in placing out children. During the forty-three years of its existence it has placed upwards of 85,000 children in families in various States of the Union. In 1881 its lodging houses sheltered 14,452 children; in 1891, though then more than 500,000 had been added to the city's population, the number of child lodgers had fallen to 11,770, thus showing the progress made. How to successfully solve the problem of dealing with the dependent poor is doubtless one of the hardest tasks of the present age, but that to bring about this result, we must begin with the children, will be denied by no one.

The Advisability of Isolating Hooping-Cough

An article in the *Hospital*, of March 5, on the above subject is worthy of attention. The *Hospital* remarks: "There can be no doubt that children suffering from this disease are in a somewhat unhappy case. The disease is so definitely infections, that it is impossible except under pressure of urgent necessity to admit those affected into wards occupied by other cases. . . Of the gravity of the malady and of the very large mortality caused by it there is unfortunately no question. With the exception of measles and diphtheria, hooping-cough is the most fatal of the infectious diseases, having been responsible for no less than 6,245 deaths in the thirty-three large towns of England and Wales during the year 1896 and 4,453 deaths during the year 1897." The vital statistics of this country reveal a corresponding rate of mortality from the same cause. Hooping-cough is, at the present time, owing to its epidemicity, an absolute bar to an admission to a hospital, no matter from what other complaint or from what complications the patient may be suffering. Pertussis is not only very infectious, but is infectious before its characteristic symptoms reveal themselves. J. Lewis Smith, in his work on "The Diseases of Infancy and Childhood," gives the following instance, illustrating both the infectiousness of hooping-cough and its incubation period. A woman having a cough for two weeks, which was afterwards ascertained to be that of pertussis, came from Boston to a family from 2 P. M. till the evening, when she left the city. During her stay she held and kissed an infant that was previously well and never been removed from the floor on which it was born. Pertussis was not at that time prevailing in New York. Four days after exposure, the infant began to cough, and this proved to be the beginning of severe pertussis." The question of isolating hooping-cough is one that naturally chiefly affects the poor in the crowded districts of large cities, and there can be no doubt but that wards for the reception of children afflicted with the complaint would prove a great boon. The *Hospital* ends a strong article with these words: "That no children's hospital, and in fact no general hospital, can be considered complete unless it has some means of isolating hooping-cough, for who shall say at what minute that troublesome disease may not arise among its inmates. Hooping-cough may only be nature's plan of clearing the world of rickety children, but nature is often cruel, while charity is kind.

SOCIETY REPORTS

NEW YORK ACADEMY OF MEDICINE.—SECTION ON PEDIATRICS.

Stated Meeting February 10, 1898.

Improved Stethoscope for Children.—Dr. H. Koplik exhibited a stethoscope modeled after the adult Yankauer-Tiemann instrument. The improvement consists in greatly reducing the size of the chest-piece.

Dr. S. Yankauer described the principles on which these stethoscopes are constructed. He said that the stethoscopes for mediate auscultation could be divided into three classes. The first class was represented by the stethoscope of Laennec, made preferably of wood or of a roll of paper. This instrument acts on the principles of transmission of the sound through the material of which the instrument is constructed. The second class is represented by the binaural stethoscope, which was originally invented in 1831 by a German, but was greatly modified and improved by Cammann and Alonzo Clark. In this class of instrument the sound-waves themselves are collected, and by reflection from the interior of the tubes, are transmitted through the latter to the ears. The third class is represented by those in which a membrane is stretched over the chest-piece of the stethoscope, so as to convert the stethoscope into a resonator. This class of instrument was not fully developed until recently, when it appeared in the form of the now well known phonendoscope. The air-chamber or resonator serves to concentrate the sounds. The form of binaural stethoscope which had received the most favor from the profession was that known as the Albion stethoscope. It is light and portable, but has the disadvantage that the neck of the chest-piece has such a small calibre that the intensity of the sound waves is seriously impaired. Dr. Yankauer said he had accordingly suggested that the neck of the chest-piece should be made of an area exactly equal to that of the two ear-tubes combined. This modification had materially improved the action of the instrument. If the stethoscope is made very light, it will not reflect the sound as well.

Hereditary Syphilis.—Dr. L. DUNCAN BULKLEY read a paper on this subject. He said that Fournier had wisely remarked that nothing was so dangerous to the surroundings as a syphilitic infant. The same observer had also made the distinction between syphilis acquired with conception, and that acquired during intra-uterine life. The former alone would he call "hereditary syphilis," but for practical purposes, hereditary syphilis may be considered as synonymous with congenital syphilis. Many cases are on record of the mother acquiring the disease from two to seven months after conception, with the result of abortion, or a syphilitic child. He was not aware of any reported cases in which infection in the ninth month had resulted in a diseased child, and usually it would escape if the infection did not occur until the eighth month. Clinical evidence is accumulating to show that many children of syphilitic fathers are born with the disease, while the mother is apparently free from it. There are many facts being presented to support the view of the paternal transmission of the disease. There are instances of the mother acquiring chancre after having given birth to a syphilitic babe. This would show that she had not the disease at the time, and hence the infant must have contracted the disease from the father. The speaker thought, therefore, that the paternal transmission of syphilis must be considered now to be an accepted fact.

The first effect of a full dose of the poison is inhibitive of the powers of procreation, and sterility is the fortunate result. With diminished virulence of the poison or greater vitality of the parents, abortion may occur at any period up to full term, but by far the larger number take place before the seventh month. Of 2,000 syphilitic children born in eleven years at one hospital, 70 per cent. died, showing the feeble vitality of these infants. Some statistics are even more striking. In one Vienna hospital, of sixty-one children born syphilitic, fifty-nine died. Of forty-seven children living at birth, only four survived more than three months. These figures, however, relate to hospital cases, and were collected some years ago. The results are better now in hospitals, and decidedly better in private than in hospital practice. The best management of these cases embraces complete treatment before procreation is attempted, thorough treatment up to confinement where syphilis exists, and early and vigorous treatment of the disease in the child. A very guarded prognosis should be given in every direction whenever there is any syphilitic element in a case.

When born alive, the syphilitic infant may present at first all the appearances of a healthy infant. When born with evidences of the disease, it rarely survives any length of time. On post-mortem examination in these cases, the spleen is found to be enormously enlarged and hardened; the lungs show a new formation of connective tissue surrounding the bronchioles and capillaries, interfering with circulation and respiration; nodules form in the plugged and distended alveoli and break down, forming caseous nodules. The other tissues, even the bones, have been found the seat of similar lesions. The skin symptoms are only a single feature, and not the most important, except for diagnosis.

If the poison is not in excess, or the vitality is very great, there is often reason for hope that the child will escape the disease. The interval which elapses before the development of the symptoms of the disease is very variable. Most writers believe that one year is the outside possible limit at which the first symptoms may appear, while good observers claim that they may be developed for the first time several years after birth. In the great majority of instances the disease soon makes its appearance. Thus, out of 249 cases collected in France, in 217 of the infants there were manifestations of the disease before the third month. It has been estimated that three-fourths developed symptoms of the disease within the first three months, but it is not safe to say that the child has escaped the disease until at least a year has elapsed. Among the earliest manifestations are peevishness and irritability at night; soon the breathing becomes harsh and difficult; then the well-known "snuffles" develop from obstruction of the nostrils; still later, the mouth becomes sore and the digestion suffers. Along with these there is emaciation, and the child begins to assume the "old man appearance." There may also be the characteristic eruptions of the skin.

The skin symptoms of hereditary syphilis are essentially similar to those seen in the acquired form of the disease. The syphilitic roseola is the form most commonly met with. It occurs in the form of rosy macules, somewhat resembling measles. After a time, they darken somewhat, and then give rise to the well known "copper hue"; but altogether too much stress has been laid upon this appearance. The early erythematous stage may be brief, and if unchecked, may be followed by an eruption of dull red and flattened papules. At this time there is generally no special arrangement of these papules. Condylomata may now be seen around the mouth and anus, and sometimes also about the fingers and toes. The secretion from these lesions is exceedingly contagious. Vesicular and pustular syphilides are comparatively rare; bullous eruptions are much more common. The latter always indicate a serious vital impairment, and if they develop early the case almost always ends fatally. Tubercular and gummatous lesions are rarely seen until much later in the disease. Prominent among the later signs of the disease are the so-called "Hutchinson teeth." It should be remembered that only the central upper incisors present truly pathognomonic signs of the disease—the the transverse notching. When characteristically altered, "pegged" and thickened and enlarged at the end, they are not to be mistaken. The flattened forehead will also be seen in many of these cases. The long bones are frequently attacked by an enchondritis, both in their extremities and their shafts. Periostitis is usually of later date. Cutaneous lesions, chiefly tubercular and gummatous, may be present as late manifestations of syphilis.

Regarding the question of the transmission of the syphilitic virus, the speaker expressed his belief in its being transmitted even to the third generation. He said that hundreds and thousands of cases of syphilis had had their origin from innocent babes. It was questionable if the child of parents with recent syphilis should ever be wet-nursed, because no one could tell when mucous patches might develop in the child's mouth. Multitudinous cases had been reported in which syphilitic infection had resulted from persons tasting the milk in the nursing bottle belonging to syphilitic infants.

The prophylactic treatment relates (1) to guarding the child from the prospective dangers of syphilis in one or both parents; and (2) guarding others from the contagious secretions given forth by the syphilitic child. The best observers agree that procreation should not be allowed until after at least two years of active treatment for recent syphilis, and until at least six months had elapsed without treatment and without any manifestations of the disease. When the mother already has the disease and has become pregnant, the treatment should be pushed most vigorously. Thus, one grain tablets of mercury and chalk should be given, every two hours, up to the utmost tolerance of the drug. In some cases, eight or ten tablets can be taken daily. Salivation must not be produced, and it may be largely prevented by caring for the mouth with cloride of potash solution and similar washes. Inunctions may be used if the stomach is irritable. This specific treatment should be continued vigorously up to the very day of confinement and should be resumed as soon thereafter as possible. It should be remembered that coryza usually appears before the skin symptoms, and that this discharge is exceedingly virulent. If at all possible, the syphilitic child should be nursed, and by its own mother, as this offers the best chances for life. The direct treatment of the hereditary syphilitic child should be begun at birth in cases in which there is even a reasonable suspicion of infection of the child. For the active treatment of the disease, the speaker said he knew of nothing better than mercurial inunctions. Blue-ointment, diluted one-half with cold cream, is rubbed over the abdomen and loins, and smeared over the flannel band, and this is worn constantly, being renewed once or twice a day. Gray powder may also be given internally. Iodide of potassium is seldom wanted in the early stages. Later on, treatment is the same as for acquired syphilis. The syrup of the iodide of iron, when vigorously pushed, will often yield the most brilliant results in the later manifestations.

Dr. S. Sherwell said regarding Colles' law, that he believed that there was a certain conservatism of nature which protects the mother from her child. He had seen about 25,000 cases of nose and throat diseases, many of them being of syphilitic character, and he had been astonished at the frequency of cases of "innocent syphilis"; he would venture to say that very nearly 30 per cent. of the cases of syphilis coming under his observation were of this variety. As to the transmission of syphilis beyond the first generation, he was of the opinion that we were all more or less influenced by the disease, for, in no other way could he explain the diminishing virulence of the disease as shown by history.

Dr. F. R. Sturgis spoke of the latest period of intrauterine life at which the child might become infected, and be born syphilitic. If the infection occurred in the seventh month, the child sometimes escaped, but an Austrian had reported a case in which near the termination of the eighth month of gestation the mother contracted syphilis, and the child was born with all the evidences of the disease. He had long held the opinion that the chances were very much in favor of the child if the father alone were syphilitic. He referred to a case in which a woman had repeatedly given birth to syphilitic children during a period of thirteen years, yet during all this time she had herself presented every evidence of blooming health. In general, it was fair to suppose that the mother is syphilitic, and if any treatment is to be carried out, *both* parents should be treated. Syphilis had its periods of repose, and it was perfectly conceivable that during such a period a child might be born without evidence of syphilitic infection. In such cases there was always a possibility of preventing the child from being syphilitic by treating the mother during pregnancy. The father *may* be treated for syphilis, but the mother *must* be treated. Dr. Sturgis said that Colles' law was simply this—that a mother can suckle her syphilitic child with impunity—from which he drew the corollary that the mother is immune to the disease. The reported cases of exceptions to this law did not seem to him wholly satisfactory; some of them seemed to be examples of acquiring the disease from outside sources. When the teeth show evidence of syphilis, the cuspid as well as the incisors are sometimes affected, but these syphilitic teeth are very misleading. These changes in the teeth simply mean an arrested growth; they occur in tubercular children, and at the present day are not regarded as pathognomonic, although always extremely suspicious. There is one variety of keratitis which had hitherto been considered as characteristic of syphilis—the punctate form. If observed about the age of puberty, as is commonly the case, it should at once excite suspicion of previous syphilis. Old scars were to be found in the classical cases, but were often entirely absent. Oftentimes at about the age of 16 or 18 years there will develop odd swellings of the bones, and obscure inflammations of the throat, and yet there will often be no evidence whatever of anterior syphilis. He was skeptical as to the evidence of the transmission of syphilis to the second or third generation. The reported cases thus far certainly had not convinced him. It is because the mother is already syphilitic and therefore immune to the disease, that physicians allow mothers to suckle their syphilitic offspring. A child that is syphilitic at birth is always in miserable physical condition and usually dies early. It should be remembered that children bear mercury very well. One of the very best methods of treatment was the smearing of the band with the ointment, as described in the paper.

Dr. E. H. Grandin said that some years ago he had had occasion to look up the literature of the subject of the intra-uterine transmission of syphilis. It seemed to him that the weight of authority was rather with Dr. Bulkley and against Dr. Sturgis. There were three ways of infection: (1) Infection of the ovum, the woman being syphilitic; (2) infection of the ovum through the spermatozoa, and (3) the intra-uterine transmission of the disease to the fetus—in other words, infection after conception. When it was remembered that there was no direct connection between the fetal and maternal lymphatics or blood vessels, it was evident that if transmission occurs, it must be in the layer intervening between the placenta and placental decidua. Therefore, whether the fetus becomes infected or not seems to depend upon the relative strength of the leucocytes on the fetal side and those on the maternal side. With a healthy placenta, it was possible for the infant to escape, though the mother might herself be infected. As he was inclined to believe that the infant might acquire syphilis through the male, without the intervention of the female, he did not feel like advising an apparently healthy mother to nurse a syphilitic infant. As sanitarians, we certainly should be interested in the syphilitic infant as a menace to the community. In these days when physicians were active in protecting the community against all contagious diseases, they seemed to have overlooked certain diseases which were responsible for fully as much evil as small pox and typhus fever. We had overlooked the damage done to women by uncured or latent gonorrhea, and the damage done to women and to her offspring, and hence to the community, by the syphilitic male. Possibly when the millenium shall have arrived, boards of health may contend that syphilitic men and syphilitic women have no business to marry.

Dr. B. Lapowski said that only two American text-books mentioned the radiating scars about the angles of the mouth as a means of differentiating between hereditary and acquired syphilis, yet it was an exceedingly important indication of hereditary syphilis. It was true that Hutchinson's teeth were not characteristic of syphilis. If a primipara had a syphilitic child, she should not be allowed, under any circumstances, to nurse it, as she might be infected by her child. The latter may infect the mother, not only by mucous patches in the mouth, but by the discharge from the nose. In the treatment of syphilitic children he had known excellent results to be obtained from bathing them once or twice a day in a bath to which five decigrammes of bichloride of mercury had been added. He would heartily endorse what had been said by Dr. Sherwell about all of us being syphilized—it was undoubtedly true. There were whole villages in Russia which were syphilized, and here abundant opportunity was afforded for proving the statements regarding the transmission of the disease from generation to generation.

Dr. Bulkley, in closing the discussion, said that he did not believe that *syphilis hereditaria tarda* exists. Cases supposed to belong to this category are those in which the earlier manifestations have been overlooked. Careful studies of the placenta, in syphilitic cases, show certain alterations allowing of greater facility for the passage of the leucocytes. This would explain the transmission of the disease. He thought the point made by Dr. Sturgis, that the mother especially should be treated, was one worthy of emphasis and careful consideration. He had found a tendency among physicians to relinquish specific treatment in the latter part of pregnancy, yet this seemed to him a mistake. His own practice was to push the treatment with the greatest possible vigor at this time.

PRACTICAL NOTES

Staphylococcus Infection.—E. Deren reports a case in which staphylo-coccus infection took place after operation for cleft palate. The wounds were covered with thick muco-pus, and the suturing broke down entirely. After two weeks the wound looked clean, the child's health was good, so that it was decided to operate again, hopeing that an immunity to staphylo-coccus infection had been established. The second operation was successful. The author thinks that in many cases of failure from infection, repetition of the operation as soon as the local symptoms have subsided may be followed by success. —*Lancet, January 29, 1898.*

Intestinal Catarrh.—1. During the heated season, keep the body cool, but avoid extremes. 2. Regulate diet properly. 3. Impress on the mother the importance of the fact that the doctor, not the neighbor, should be called to treat the very first variation from normal digestion. 4. Also the fact that the opinion of the doctor as regards food is quite as important as in regard to medicine. 5. See that less but more digestible food is given. 6. Use plenty of pure water internally and externally. 7. Cleanliness must be insisted upon.—*Dr. R. Beatie, in the Medical Age.*

Balsam-Oil Dressings for Surgical Cases.—

℞ Balsam of Peru, 5% .... ♏xxiv.
Castor oil, 95% .... ℥i.

Apply on absorbent gauze, which is then to be covered with rubber tissue and held in place by a bandage.—*New York Polyclinic.*

Tincture of Myrrh in Mixed Infections.—As one result of the inability to grapple with mixed infections, the administration of tincture of myrrh internally, which was first suggested in Philadelphia about ten years ago, is being resorted to in Europe, on account of its effect in increasing the number of leucocytes. Stroll, of Munich, reports eighty cases with only one death, treated by this method. He prescribes:

℞	Tincture of myrrh................	4 parts.
	Glycerin	8 parts.
	Distilled water—enough to make..	200 parts.

This is given every hour, or, in severe cases of diphtheria, every half hour; the dose for a child under two years, a coffee-spoonful, and in children up to fifteen years one, to two teaspoonfuls.—*Therapeutic Gazette.*

Empyema of the Antrum.—DOUGLAS reports in the Australasian *Medical Gazette* a case of empyema of the antrum in a child three weeks old. An opening was made inside the mouth, external to the alveolus, and the cavity washed out and drained. No cause could be discovered except that for the first week after birth the mother's nipples were sore and discharged "matter." The symptoms in the child appeared in a fortnight, and the nurse applied lotions. After opening the cavity, the child recovered.

Fibro Sarcoma of the Vagina.—M. RICARD reported before the Surgical Society of Paris a case of fibro sarcoma of the vagina occurring in an infant of eight months, which had been observed by M. Huguier. The tumor, which was located between the labia majora, was enucleated, and the pedicle which sprang from the vagina three centimeters inside its surface, was extirpated. Recovery was complete in eight days. There were few sarcomatous cells in the tissue, not enough, according to Ricard to render the tumor malignant. Ricard recommended the use of catgut sutures rather than silk.—*Le Progress Médicale, January 15, 1898.*

The Influence of Paternal Alcoholism on the Vitality of the Children has again been demonstrated in a case reported by Anthony. A robust, healthy woman, married a drunkard. Five children were borne by her during a period of nine years. Every one of these was delicate and small at birth. Four died from weakness before the tenth day, and the fifth one attained the age of only four years, in spite of the best care. The woman procured a divorce and married another man, with whom she had two children; both of these (aged respectively 4 years and 14 days) are in robust health. The first husband did not suffer from syphilis.—(*Gaz. hebdom. de méd. et de chir.*)

Sporadic Cretinism and Thyreoid Treatment.—Three cases were reported. One of the most prominent phenomena in the treatment of sporadic cretinism with thyreoid preparations is the rapid growth of the children in height. With specific treatment, T. Telford Smith, observed a cretin 15 years of age grow over 10 cm.—within a period of ten months and noticed in another patient, as had already been noticed by Parker and Thomson, that this rapid growth is liable to lead to deformity of the lower thigh. He, therefore, advises that these children should be restrained from running about. A strongly cretinic girl, 11 years of age, who had been ill for eight years, observed by C. M. Anderson, weighed fifty-seven pounds, and was 103 cm. in height before treatment. During treatment, eight pounds were lost in weight in seven months, and an increase in height of nearly 8 cm. was attained. After thirteen and one-half months, the increase in height amounted to 15⅓ cm., and all traces of disease had disappeared. Of especial interest was the improvement in the intellect. H. E. Drake-Brockmann mentions an advanced case of the disease, beginning in the tenth year of life, of six years duration, which markedly improved under thyreoid treatment, both bodily and intellectually; the thyreoid gland which was greatly enlarged, diminished considerably in volume during the treatment.

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ABSTRACTS

SYMPTOMS OF POISONING FOLLOWING A PROPHYLACTCI INJECTION OF BEHRING'S ANTITOXIN.

Dr. F. Rauschenbusch (*Berlin Klin. Wochenschr., 1897, xxxiv, 694*).—The following case occurred in the family of the author. On April 23, a daughter, four years of age, became ill with a tonsillar affection, which did not disappear in spite of the faithful use of a gargle. Later it was determined that the patient had come in contact three days before with a child who had diphtheria. On the following day the deposit on the tonsils increased, although the child seemed otherwise well and the fever was slight. On April 25, the diagnosis of diphtheria seemed warranted, and the contents of vial No. i (600 Immunization units) was injected subcutaneously, and a gargle containing cyanide of mercury, 1 to 10,000, was frequently used. The brother of the patient, 3 years of age, was at once taken away and placed in another house with the rest of the children. Nevertheless, after six days, this boy became ill and presented an extensive diphtheritic membrane within a few hours, so that he was at once treated with a subcutaneous injection of Behring's serum No. i. Both children improved, and the pseudomembraneous deposit disappeared from the tonsils of the girl on the fourth day, and from the boys throat on the sixth day of the disease. For the protection of the rest of the children, three, and of the servants, it was thought advisable to treat them with immunization dose. As the smaller vials could not be obtained at the apothecary, he took vial No. ii, containing 1000 units of serum, and he injected the immunization doses carefully into the thigh of each of the three children and two female servants, five persons in all. Each person received exactly 200 units of serum. The two boys and the servants presented no reaction to the injection. In a 10 year old girl, however, who was the second person to be inoculated, quite dangerous symptoms made their appearance. Five minutes after the injection he was informed that an intensely itching eruption had made its appearance. The right side of the child, beginning at the thigh into which the injection had been made, was covered with an extensive wheal-like eruption which had extended to the right side of the face. The itching seemed unbearable. When the child was seen ten minutes later, the whole body, and especially the face, was of a deep scarlet color. The itching was greatly relieved by a warm bath. Previous to, and after the bath, however, the child had an attack of syncope, which gradually passed off. She was then put to bed, but could not raise her head without experiencing vertigo and syncope. The radial pulse was absent at both wrists. The heart beats were weak, though regular. The pupils were dilated and reacted only very slowly to light. The child desired to sleep continually, and to lay with its head low.

Answers to questions were very slowly given. The skin became quite cool and pale. The deep scarlet hue had totally disappeared, only the face still presented a few reddish brown spots. The exhibition internally of spirits of ether, camphor and champagne only temporarily stimulated the weak action of the heart Two hours after the injection, severe vomiting of a frothy material took place, which recurred a few times, after taking bicarbonate of sodium. After the vomiting the subjective condition improved. Eight hours after the injection the itching wheal-like eruption made its appearance on the hands and feet. These began to swell, as also the face, especially the eyelids, and swellings appeared in the mouth which caused some difficulty in swallowing. The weak heart beat had gradually improved, though the radial pulse was, as yet, hardly to be felt. The urine was dark, containing no albumin. Five days later the patient was attacked with a follicular tonsillitis, which gave rise after a few days to the suspicion of diphtheria, The faithful use of a gargle, however, dissipated this in four days. The serious heart failure which accompanied the eruption should be referred to the toxic effect of Behring's serum. As, however, the other members of the family and the servants who received the same injection, remained free from any bad symptoms, there seems to have been an individual predisposition present in this 4 year old girl, and the case should lead us to exert great care in the administration of antitoxin for immunization.

COLOSSAL BRONCHIECTASIS IN A CHILD.

Heubner (*Deutsch. Med. Wochenschr. 1898, xxiv., 10*), reported this case to the Berl. Medic. Gesellschaft. He mentions that slight bronchiectasis was not rare in childhood, and may even recover. Very large bronchiectases, on the other hand, are exceedingly rare. This case was that of a three-year old child, from a tuberculous family, which, at first healthy, had frequent attacks of bronchial catarrh since it was one year old. It was admitted to the clinic on account of cough and dyspnea and a supposed pleuritis was not confirmed by puncture. Later, the symptoms of a bronchiectasis with contraction of the lung became quite plain. The cardiac impulse is felt in the axilla, periodical rises of temperature, and expectoration (containing no tubercle bacilli), and symptoms of cavity formation came on. Within three months the child has lost in the clinic three kg. in weight when it had an attack of measles. From this time on it rapidly lost ground; tubercle bacilli were now present in the sputum; death followed. Undoubtedly we had to deal here with the secondary infection of a bronchiectatic cavity by tubercle bacilli, for the eruption of small tubercles, as proved by the autopsy, is of recent nature.

Discussion—Virchow: One lung has lost nearly all its respiratory tissue, as is found only in the rarest cases. Such an extensive bronchiectasis he had only rarely seen in his experience. An ulcerative process could nowhere be found. The bronchi are all covered with mucous membrane. The recent tubercle nodules are proof of a later infection with tubercle bacilli.

Hansemann mentioned a case of bronchiectatic cavities in both lungs, of which only one became secondarily infected with tubercle bacilli, and which had not led to tuberculous processes in any other part of the body.

A. Baginsky: Bronchiectasis is not rare in children. They were especially developed after violent cough paroxysms in whooping-cough. He mentioned a case in which the child contracted whooping-cough in its fourth year. Bronchiectasis developed, and a tuberculous peritonitis caused death in the thirteenth year of life.

NASALPOLYPI IN A CHILD EIGHT YEARS OLD.

Unna (*Münch. Med. Wochenschr.*, *1898*, *xlv*, *27*).—Max E., 8 years of age, was brought to the poliklinik of the Jewish Krankenhause on account of an occlusion of the left nostril. When U. saw the case, his first question was, "when did you place the cotton in the nose?" As the child denied having placed anything in his nose, even when questioned by his father, U. made an attempt to move the cotton with a sound—unsuccessfully, however. When attempts at extraction were made with a sharp hook, a few spots of blood made their appearance. On inspection of the nasal cavity, a smeary, greenish-white mass of the form of a horn of plenty was discovered extending from the left choana towards the middle of the roof of the pharynx, and seemingly inserted in the latter by its apex. Attempts to remove this mass with the hooked forceps were futile—single portions only were torn away, though it was seen that the point of the mass was only slightly adherent to the pharyngeal roof. Soon after, the mother brought this mass which the patient succeeded in bringing up, to the poliklinik. It had a nearly unbearable odor. The tumor, which had been wedged into the posterior half of the nostril, was removed by the cold wire—it had a greyish-white color, was unusually firm and tough. Hemorrhage was slight. It was possible now to see distinctly the external upper margin of the choana, as the point of insertion. U. was therefore dealing with a polypus of the choana, which, as far as he could find in the text-books, was very rare at this age (before puberty). The boy, by chance, came to the poliklinik again to-day; he presented another tumor deep in the nostril, but somewhat anterior, arising from the middle of the nasal passage. This tumor was also removed. It proved to be a thick-walled unilocular cyst, of the size of a tonsil, of a deep saffron-yellow color; the internal surface of its wall is somewhat uneven, the outer is smooth. A microscopical examination has not yet been made.

PROLAPSUS UTERI-TOTALIS IN A NEW-BORN.

Radwansky (*Munch. Med. Wochenschr.*, *1898*, *xlv*, *53*.)—Was called to see a child two days old, who, according to the midwife, had been born with a prolapsus uteri. He found a roundish tumor 4 cm. long protruding between the labia majora, which was indeed the uterus, the body of the latter being external to the pelvic outlet. The portio vaginalis was swollen to the size of a finger tip of a man, highly congested; at the os uteri an ulcer presented, covered with yellowish pus, of the size of a small twenty-penny piece. The ulcer was plainly caused by friction and scraping of the mucous membrane and from soiling with the urine and feces of the infant. The sound could be passed to the depth of 3 cm. into the uterus. Although the tumor was easily replaced, the attempt invariably roused energetic action of the abdominal muscles, and a desire to pass stool; a short delay of the finger while returning the uterus into the pelvic cavity, at one time produced a stool at once; after removing the finger the uterus was so strongly forced out that its fundus became external to the vulva. A cotton tampon was also rapidly forced out. He therefore confined himself to recommending the frequent cleansing of the genital organs with a solution of boric acid, and the application to the tumor of a pad smeared with boric acid ointment. When the child was again seen three days later, the uterus had partly returned into the pelvis, and the portio vaginalis was less tumefied. Ten days later the uterus had retreated so far that the portio vaginalis only protruded about 0.5 cm. between the labiæ. On October 2, that is half a year later, the child was seen again. The portio vaginalis had the appearance as though flattened at the sides, having a normally tinted mucous membrane, and is barely visible at the introitus when the labiæ are forcibly separated. The external orifice at the same time is about 0.75 cm. long and does not run diagonally, but from above downward. We have thus only a descensus uteri left. The cause of this dislocation, in R.'s opinion, seems to have been a relaxation of the ligaments upholding the uterus.

THE ANTITOXIC AND THERAPEUTIC ACTION OF HUMAN BLOOD, AFTER RECOVERY FROM INFECTIOUS DISEASES.

(Scarlet Fever, Measles, Pneumonia, and Erysipelas.)

O. Huber and F. Blumenthal (*Berl. Klin. Wochensch, 1895, xxxiv, 671*), say that the presence of specific antitoxins in the blood of convalescents from infectious diseases gave rise to the idea of its therapeutic application. It was prepared by mixing the blood of the convalescent patient with an equal quantity of a physiological salt solution and adding 1 per cent. of chloroform. It was frequently shaken and allowed to stand for twenty-four hours, after which time the solution was filtered through sterilized linen and gravel. A reddish, sterile fluid was obtained. The amount of hemoglobin contained in this was harmless, but it could be partially removed by repeated filtration. Over 100 injections were made with the serum from convalescents without the formation of an abscess. In healthy persons, and in those not suffering from infectious disease, only a slight local reaction was observed. The amount of specific antitoxin contained in the blood of convalescents, from diphtheria and pneumonia, was demonstrated in animals. The absolute protective power of the filtrate was approximately equal to that of the serum. However in the method of preparation employed by the author, double the amount of antitoxin was obtained as compared to the usual preparation of serum. In scarlet fever, as regards lowering of the fever and shortening of the duration of the disease, very favorable results were obtained, as a rule by the injection of this blood from convalescents; and a somewhat similar, although less distinct action was seen in measles. In pneumonia a lowering of the temperature and a favorable influence on the general condition was also obtained, although it was impossible to cause the crisis by the use of blood from convalescents from pneumonia. In erysipelas and septic affections, experiments made from the blood of convalescents from these diseases, did not produce favorable results, and quite a severe reaction frequently followed the injection. Although the manufacture of a specific antitoxin has not yet been successful, the action of the blood of convalescents has been demonstrated.

CHYLOUS HYDROPS OF THE ABDOMINAL CAVITY.

Czerny (*Münch. Med. Wochenschr, 1898, xlv. 30*). This condition was developed in a girl eighteen years of age, within four months, contemporary with anasarca of the lower half of the body. An examination of the heart and liver did not develop any abnormal conditions, the urine, which was voided in small quantities (3-400 g) contained a trace of albumin, but no casts.

As the ascites after three tappings, in which about three and a half to four and a half litres of a milky, slightly yellowish fluid, was obtained, always returned again within a few days, and orthopnoea became intense. It was decided to do laparotomy, and both ovaries were found to be affected with sarcomata, the size of a fist, containing also a number of cysts the size of nuts. The pedicles were short and broad, the peritoneum edematous, and somewhat hemorrhagic. As these tumors were wedged in the entrance to the lesser pelvis, they may have caused the edema of the lower extremities by pressure exerted on the vena iliaca. Sarcomata of the ovaries, besides this, are the cause of early severe ascites.

More difficult of explanation was the rare finding of chyle in the ascitic fluid.

Chemical examination of the fluid showed a sp.gr. of 1.032, albumin, 3 per cent., fatty matter, 0.25 per cent.; absence of sugar, traces of fibrin and bile pigment. Microscopical examination revealed globules of fatty granules, detritus like fatty granules, which were, as a rule, somewhat larger than the fat globules of milk.

As is known, according to Quincke, we have a hydrops chylosus, and a hydrops adiposus, While the first is determined by the admixture of chyle, the latter is caused by the presence of cell elements which have undergone fatty degeneration, particularly in carcinoma and tuberculosis peritonei. A cell metastasis, or tuberculosis of the peritoneum, was out of the question in this case. Nor was epithelium in the stage of fatty degeneration discovered microscopically in the fluid. On the other hand, the amount of fat was much less and sugar was altogether absent.

Notwithstanding, we are probably compelled to class this case in the group of chylous hydrops. The examination of the tumors revealed an alveolar structure and in certain portions the fibres of cells ramifying like vessels, are plentifully filled with polygonal and round cells, which show a disposition to hyaline degeneration. C. is inclined to class these tumors with the angiosarcomata. These, as we know, are accompanied early by metastasis of the lymphatic glands, and the latter may be a cause of obstruction and rupture of chyle-vessels. Should this be true, a return of the anasarca is to be expected, and the prognosis, on account of the probable presence of metastasis, is therefore unfavorable.

ON SCARLET FEVER.

PROF. C. SEITZ (*Münch. Med. Wochenscha, 1898, xlv. 76*). In 1887 S. made bacteriological blood studies in twelve cases of scarlet fever, within twenty hours from the appearance of the eruption. More than 150 plates and vessels taken from eleven cases remained sterile—only in one case, examined on the fourth day of the disease, was he able to find streptococci; this case had a fatal termination on the eleventh day, with symptoms of general sepsis; an analagous streptococcus finding was obtained by a bacteriological examination of the organs in two bodies dead from scarlet fever, which ran a course of three weeks, with the symptoms of a general constitutional infection. Prof. Seitz believes the invasion by streptococci to be a secondary symptom; it leads to grave septic forms of disease. Doehle's findings of protozoa in the blood of scarlet fever patients are to be corroborated still further; Seitz examined eighty blood preparations without any result.

A general consideration of 800 cases in relation to the seasons of the year led to the belief that this disease is independent of the seasons and the state of the weather, the greatest semi-annual frequency (87 F.) took place in the summer season, together with the greatest frequency of nephritis—similar numbers were also obtained in winter epidemics; besides its greater epidemic distribution this disease also makes its appearance in local endemics confined to houses and groups of habitations. Following up these dwelling house endemics, there was also established the fact that in certain houses cases of scarlet fever are yearly met with in the changing tenantry, showing the existence of a local infectious focus in the remarkable frequency of this disease in certain families, which has already been mentioned by Thomas and others, the members of which therefore seem to show a peculiar disposition to scarlet fever. Besides the family disposition, there is also an individual temporary disposition, for in only sixty-two groups of 150 cases the illness of brothers or sisters took place at the same time or at an interval or one to two days, while in ninety groups of 221 cases individual infection followed at intervals of one to six weeks, where the chances of infection were equal. In five cases, nursing relatives, who had not come in contact with other patients, were infected from three to five weeks in the period of nursing.

Other infectious diseases occurring in the course of scarlet fever were diphtheria, eight cases; measles, three cases; whooping cough, four cases; and one case of varicella. A second attack of scarlet fever in the same individual was observed twice—in one case after an interval of one year, in another of two years, the second attack being the most severe. Relapses of the eruption was frequently observed, occurring usually after eight to ten days.

Affections of the kidneys were not at all influenced in their frequency by the season of the year. Eighty-seven cases of this complication occurred in winter, ninety-eight in the summer season. The family disposition also did not play a marked rôle here. The character of the epidemic at the time seems to be responsible for the smaller number of this complication in scarlet fever. The supposition that the catching of cold and other external circumstances (for example, improper food), influence the occurrence of nephritis, was not supported by fact. In passing, it may be mentioned that during the last year and a half a large series of examinations for the diazoreaction was made of scarlet fever patients urine, but that the result proved negative. The manifold varieties of clinical throat affections during scarlet fever are of practical interest because these are even more frequent than kidney disease, the starting point of other dangerous complications. The affection designated scarlatinal diphtheria, on account of certain analogies in the local findings (fibrinous exudation and necrosis) has now been made clear etiologically. Following the weight already laid on the absence of paralysis, and the absence of its tendency to spread downward to the respiratory organs in the pre-bacteriological era, as militating against the identity of the so-called scarlatinal-diphtheria with true diphtheria, bacteriological examinations of innumerable cases has demonstrated that streptococci are, as a rule, present in pseudomembranous scarlatinal anginas, and the diphtheria bacilli are absent. That true diphtheria may complicate a scarlet fever case, is not to be denied, this does not, however, happen with more frequency than in measles, whooping cough, etc. These rare cases of double infection, and the more frequent finding of Loefflers bacilli in scarlet fever may explain the curious fact that a patient suffering with scarlet fever may infect another individual with diphtheria. It was formerly attempted, through this fact, to argue a near relation between scarlet fever and diphtheria, and it was thought warranted to draw conclusions of a relation between these two diseases, at least between the diphtheritic and scarlatinal affections of the throat.

The so-called scarlatinal diphtheria, has no connection whatever with true diphtheria. For this reason Seitz does not recommend the use of serum in scarlatinal throat deposits. In the greater number of cases a diphtheroid throat affection in scarlet fever will rapidly disappear; there are cases, of course in which death takes place rapidly accompanied by grave general disturbances (scarlatina maligna-Henoch); a lethal issue is also usually met with in the "epidemic form," in which the pharynx and nose seem to overflow with muco-purulent, stinking masses; the gangrenous process spreads nearly unchecked, involving latterly also the integument of the lips and cheeks, hemorrhages and septicopyemic disease of other organs, complete the grave picture, which finds its conclusion, as a rule, with increasing symptoms of collapse, by the end of a week. We meet also with another form of practical importance, *Heubner's lenticular* *scarlatinal diphtheroid*, which usually makes its appearance between the sixth and eighth day, at a time in which, in an ordinary case, the throat already seems clean and the temperature has fallen. Together with this there are cases in which, besides the presence of the more or less affected general condition, no otitis or articular affection is present, but an intense and painful swelling of the glands at the angle of the jaw presents; the inspection of the throat to which we are led by this, frequently reveals no particular lesions, or else there may be visible deposits at various points, deposits which are not characterized by any especial tint, but which, nevertheless, appear very stubborn; these are also thrown off accompanied with hemorrhage, when a more or less deep ulceration appears, perforation of the soft palate is also met with as in lues; although the source of the fever and the swelling of the lymphatic glands is thus frequently evident, we are led in other cases to suspect the seat of the necrosis to be at points inaccessible to inspection by the presence of a sanguinolent irritating secretion from the nostrils. After continuing for a number of days the process may gradually disappear or it may stubbornly continue by invading other localities, the lymphatic glands at the neck go on to suppuration, or else a septic inflammation of the lungs and of the serous membranes are added, to which the patient succumbs in the third or fourth week.

The treatment of these scarlatinous throat affections is given by Seitz as follows: Great stress should be laid from the beginning of the disease, no matter whether deposits are present in the throat or not, on the methodical cleansing of the pharyngeal cavity, at intervals of two to three hours, by gargles, or irrigations with neutral solutions (salt-water, borax, etc.), especially in patients with a high temperature and soporous condition. Where deposits were visible in the throat during the first few days, Seitz did not content himself with expectant treatment, but attempted to remove them gently with a cotton swab and touched the part also with a cotton applicator, with a 3 to 5 per cent. solution of carbolic acid. If foul-smelling exudates from the nose and mouth indicate the presence of severe affections in the nose and throat, irrigations of the nose are undoubtedly also indicated, for the removal of the dêbris, and for keeping free the respiratory passages, they do not accomplish more. After the streptococci have now advanced from the original settlement in the throat and nose to the lymphatic glands their invasion of the various organs of the body, and, above all, of the circulation is threatened. For combating this dangerous complication Heubner has introduced into practice the method originally recommended by Taube, namely, the periodical injection of carbolic acid into the tonsillar tissue and that of the soft palate, and has obtained notable success in this way. Undoubtedly in in all cases a symptomatic effect is obtained at once, for soon after the first injection, remarkable relief in swallowing is obtained, which lasts a number of hours, due to the anesthetic quality of the carbolic acid. The high fever, as a rule, already begins to lessen after the second injection and the tenderness and swelling of the glands is much diminished. No danger results to the kidneys. A daily injection of 1 c. cm of a 3 per cent. solution of carbolic acid is made, divided, however, into a number of punctures; the injections are continued until the temperature remains near normal and the lymphatic enlargement diminishes; this generally happens within three to eight days. The injections are to be commenced if the fever remains high at the end of the first week, or if it then rises again, and the increasing swelling of the glands indicate the seat of the trouble; cases occurring in the second week may also give good results, as long as the absence of any inflammation of the lungs and of the serous membranes, assures us that streptococcus infection has not taken place.

TEETH AT BIRTH.

ALF. GEBERT, D.D.S. (*Arch. f. Kinderheilk, 1897, xxiv, 88*)—Centuries ago we already find reports in literature where children have been ushered into this world with "congenital" teeth, it would, however, be more correct to say, teeth that have appeared at or soon after birth. The cause of this early eruption of teeth is due, according to Fleishmann, to three possible factors:

1. *Premature* germinal disposition, followed by normal development.
2. *Normal* girminal disposition, with hastened growth at any later fetal period.
3. Superficial position of the tooth-sac.

Those teeth that are already partly developed, erupt without a root, and seemingly have their seat in the gum, would belong to the latter category.

Baume, discriminates between two kinds of prematurely erupted teeth, namely, teeth devoid of roots, therefore only loosely imbedded, and in consequence, soon again lost, and secondly, teeth in which a portion of the root is present. In the first variety, Baume assumes an early eruption through the jaw, while in the second form, an early development of the tooth itself may be taken for granted.

In certain cases, the eruption of teeth at birth should undoubtedly be looked upon as a form of congenital monstrosity (Missgeburth), this has never before been dwelled upon. In those cases in which the tooth is only loosely imbedded, the monstrosity is not difficult of explanation. As we know, a broad process grows from the deepest layers of the epithelium of the oral cavity in the second month of fetal life, which was called by Koelliker, the germ enamel (Schmelzkeim); in its deeper half, single points are later changed into the organs of enamel (Schmelzorganen), from which the teeth are gradually evolved. It will now be necessary to assume for the superficially developed teeth, that the germ enamel has differentiated too early where the teeth have appeared at birth, at least not on the right spot to the organs of enamel. This case—that the teeth have been too superficially developed—we may assume where the teeth lay perfectly loose in the mucous membrane, and hence are liable to fall out on the slightest touch.

The superficially developed teeth may occasionally have an abnormal shape, as in case 2. Henoch also mentions that one or two pointed, more or less hook-shaped teeth are found here, which imbedded only in a duplication of the gum, are from the beginning loose and easily moved.

Accompanying these superficially developed dental germs we meet with more fully developed ones, which accordingly are less inclined to fall out. Thus in a number of cases reported, the teeth were already present at birth, and remained present for months and years.

The teeth which remain in the jaw present the following peculiarities. Their color is, as a rule, yellower than the normal teeth, their length vary from the latter, so that one is able, at the first glance, to distinguish a tooth erupted during birth from any other. In the greater number of cases these teeth become carious after a few months and crumble to pieces.

In regard to the kind of teeth which erupt prematurely, they are usually the middle incisors, and those two, of the lower jaw, while the molars are less frequently, and the eyeteeth are hardly ever present at birth. Henoch mentions two cases in which children came into this world with teeth situated in the upper jaw.

As regards the *cause* of this premature eruption, we should look upon the displacement of the dental germ, as far as we may speak of such in "congenital" teeth, as an anomally, as is proved by their occasional appearance with monstrosities of another form. Perhaps a congenital syphilis may have a hand in the matter. Leaving aside all this, it seems to be an established fact that the teeth may begin to erupt at the time of birth in consequence of an abnormally rapid development.

According to Baume, Porges observed a case in which all the milk-teeth made their appearance within six weeks, they were, however, lost again; Fleishmann mentions Matter's case, who tells of a 5 year old girl who was born with two teeth, and was in possession of all milk-teeth at 16 months of age.

Henoch entertains other views in regard to the eruption of teeth at birth—concerning those that have an alveolar bed. He looks for the cause in an inflammatory process of the jaw, which forces the teeth out from the alveoli. He therefore recommends that these teeth be removed as soon as they loosen. He adduces some examples for his belief.

The following may be said of treatment: If the teeth are very loose, they ought to be removed, if only for the reason that they may be swallowed. Otherwise, extraction should be avoided as a rule. Very unpleasant complications, as Henoch met with in the two cases already mentioned, may namely follow, as suppuration of the alveolar border, and subsequently the throwing off of necrotic pieces of bone, which at so early an age, is sure to include great danger. Furthermore, the hemorrhage after extraction in the new born should be taken into account. Fleishmann mentions a case where, in the clinic of Magitot, the lower middle incisors were removed from a child two days after birth, and an uncontrollable hemorrhage occurred, from which the child died. To remove these teeth to facilitate nursing, is not necessary, as the mother may use a rubber nipple, and the child will only be temporary inconvenienced by the presence of the teeth.

A CASE OF IMPERATIVE CONCEPTION AND CONTACT-FEAR IN CHILDHOOD.

S. Kalischer (*Arch. f. Kinderheilk, 1897, xxiv, 47*). Max J., a boy eight years of age, comes from a family in which nervous diseases or mental disturbances, as far as the history shows, have been absent. The father of the patient died, it is said, from some heart and kidney affection, the mother died from erysipelas of the face and scalp during child-birth, after an easy confinement with this boy. A brother of this patient, ten years old, is healthy. Since birth the child has been brought up by an aunt, with whom he is still living at present. The child developed normally, began to walk and talk in about one year, and was perfectly well during the first few years of life, with the exception of "convulsions from teething," when nine months old. At four years of age he contracted a pulmonary catarrh and later on had frequently to remain home from school on account of general debility, pulmonary and pleuritic inflammation. At school the teacher thinks he is "fickle." The boy himself complains of being tired when he writes or figures; "he felt sore all over," and not infrequently does he go to sleep while studying. Except for this he is smart, quiet, obedient and does not differ in his deportment from other children of his age,

Since, October, 1896, he became physically changed; frequently said that he had to die, feared he would swallow a piece of glass whenever he sees a glass vessel or broken glass. A sensation of suffocation frequently overcomes him, or as if he had taken poison; at other times he feels the loss of air. When he saw some bottles containing chemicals, in a stable, he gave vent to the fear that they might contain poison, with which he might come in contact, or which he might drink. He therefore avoided the neighborhood of this stable. Occasionally he has a doubt whether he should touch a thing and remains standing irresolutely; thus he is afraid to touch a cake which has been taken up by a friend and to eat it; it might have been contaminated with dirt or poison. When the aunt cleans the windows he inquiries of her whether she uses oleum, and would he die if he should touch the fluid. If, in playing, he missed one of his tin soldiers, he is afraid that he swallowed it and must die. When needles are lying on the table he has them removed, that they may not injure him. Should he find small pieces of bone, while eating, he will eat no more; he is also very susceptible to any filth, and to all abnormal odors. He is afraid to touch colored play-toys, and is careful not to touch black articles, also ink. At the same time he complains frequently of weakness and debility; he is in dread that he may fall asleep and never again awake. He is occasionally given to crying without any cause. He sleeps well at night, occasionally talking in his sleep. He has not the liking to his lessons which he formerly had, and sometimes there is a tremor in his hands. At times, however, he is happy and bright and plays with other children as formerly.

The first examination took place October 27, 1896, and proves that we have to deal with a weak and gracefully formed, delicate, pale boy, with a peevish and suffering aspect. There are no physical anomalies besides an enlargement of the glands. It may be that the left pupil is at times somewhat larger than the right in a good light reaction. The boy answers questions clearly, distinctly and pleasantly; he has a good conception of all things (space, time, vicinity, etc.), and possesses insight and knowledge equivalent to his age; his memory is good, only in arithmetic he is somewhat backward. Being questioned about his disease, he answers only slowly and peevishly, that he continually imagines that he must die, and that his head gave him such a sensation as though it would burst; he often feels as if he were choking, he is aware of the fact that it was all imagination, but he could not control himself when it came on.

The therapeutic measures applied were: removal from school, strengthening diet, sesame oil, warm and moist packs in the exacerbation accompanied by restlessness and fear, otherwise cool rubbings; plenty of exercise in the fresh air; light amusements and distractions, and then fifteen drops three times a day of a mixture of tinct. rhei aquos 13.0 and tinct. opii simpl 2.0, to be increased. During the next days and weeks his condition was variable. The boy played more frequently again with other children and repeatedly said he would not be sick again, what he said had had all been rot. In the evening he complained occasionally of frontal headache and vertigo; everything seemed to turn when he looked at the ceiling. Repeatedly he remarked that one of his friends might fall out of the window. Sometimes he would, for hours at a time, give utterance to questions, doubts, oppressive thoughts and imperative conceptions; nevertheless his condition improved notably during the months of January and February, 1897. Appetite improved, weight increased, his appearance became brighter, and his general humor more joyous; his mention of funereal thoughts, ideas of poisoning and fear of suffocation became more rare; he already touched ink and colored toys, was less anxious at meals, asked less questions about his condition and became more alert and more positive in his movements and actions, the inclination to brood was also improved. A superficial examination, made at the end of February, showed that to strangers the child might seem cured, but that this is not the case was soon brought out by a closer examination. In the first instance, his foster mother has discovered that the boy washes his hands fifteen times or more daily; he did this when he went down stairs and when he came up, and often a number of times following. If his hands touched his coat or any article which seemed at all suspicious to him, the washing of his hands was at once repeated. His aversion to bad odors and to dirt remained as before; thus he would not have anything to do with, nor touch children with dirty hauds or ears. If some one touched his clothing in passing, he asks his foster mother whether it might not hurt him. And if his hand touched anything which he thinks noxious or poisonous, he frequently does not quiet down until his hand has been brought in contact with his foster mother's mouth, to assure himself, that the former is not afraid of touching his hand and the poison it may contain, and does not think it dangerous. Bonbons, which have been touched by another are usually thrown away by him. These symptoms, however, make their appearance only isolated and periodically, and he frequently repeats himself that it was all rot which he had said on the previous days.

The head symptoms and other abnormal sensations have not again been complained of, only that he occasionally feels tired and exhausted. He listened more intelligently to good advice and the refutation of his "imagination," and the fear and restlessness which accompanied it, was hardly noticed now. The patient therefore suffered from psychic changes, manifesting themselves in a depressed mood, hypochondriac sensations' folie du donte, délire du toucher, fear of poisoning, anxiety, and imperative conceptions of various kinds.

In the treatment of this affection, the well-known hygienic, dietetic measures are to be employed to produce a strengthening of the whole organism, of the nervous system and the power of resistance, as the taking the child away from school, exercise and work out of doors, good care, hydropathic measures, psychic distractions without excitement or labor. Narcotics, as opium, in small doses, are to be recommended in these cases where great restlessness, anxiety, depression, excitement and insomnia accompany the psychic imperative conceptions. It seems, however, the condition of restlessness and anxiety produced by the imperative conceptions in children does not appear in so high a degree as in the adult, and the reaction of the strange thoughts and sensations of the childish mind and soul is less violent. For this reason, too, a removal from their old surroundings is not so imperative. This, however, seems to me to be urgently desired in those cases where hereditary neurophatic children are continually exposed to the unfavorable influence of ill and excited or nervous parents. A great deal is ascribed to hereditary taint, which has been nourished in early childhood by appropriate surroundings, false principles of education and the example and model of unhealthy parents.

Hypnosis, which may nearly always be substituted by intelligent suggestion has been practiced successfully by some authors (Oppenheim) in adults, but is looked upon by others, as Thomsen, as harmful.

The success will probably be greatly influenced by the form of the disease, and be more favorable where the imperative suggestions arise in the course of a hysteria, neurasthenia, or general debility, than where they are part of a disease, per se (insanity).

THE SEQUELÆ OF SUBCUTANEOUS FRACTURE OF THE SKULL DURING THE FIRST YEARS OF LIFE.

WEINLECHNER (*Der Kindergartz, 1898, ix. 15*). In an address before the Gesellschaft der Aerzte in Vienna says: Following subcutaneous fissure and fracture of the skull during the first years of life there are formed deficiencies of the skull to which the brain adheres, or where a meningocele is formed, or both may be present combined. In most instances the right parietal elevation is the seat of these changes. The bony wall in this case lies higher than the soft parts which cover the brain. When firmer pressure is exerted, the brain rises to the border of the hiatus or above it. A mistake with congenital cerebral hernia, which is most rare, is easily avoided. The hiatus of the skull in this case remains stationary, does not in itself cause any symptoms, there is, however, danger to the brain which is only partially protected.

Still more frequently do we meet with deficiency of the skull with pseudo-meningoceles. Here we often have injuries of the soft meninges and of the brain. After the lapse of years even we are able to demonstrate remnants of the hematoma. The fracture of the skull in pseudo-meningocele becomes enlarged, not so great however, as in fractures of the skull with adherent brain tissue. In pseudo-meningocele a tumor situated over the deficiency of the skull is found, which is absent in cases of adherent brain tissue. W. has observed a case in which both forms were united.

Such sequelæ of fractures of the skull, are only observed during the first years of life, later they do not occur. In the defects of ossification of the skull during the first years of life, and enlargement and bulging forward of the skull is not observed.

Therapeutically our success is greater during the present antiseptic era. In the early stage, the pseudo-meningocele may be cured by splitting the tumor and applying an iodoform tampon. In older cases the tumor should be extirpated. For covering the opening in the skull an osteoplastic, or heteroplastic operation, with the employment of celluloid plates, might be considered.

STUDIES OF THE PERCENTAGE OF FAT, AND THE DEGREE OF STERILIZATION OF MILK FOR CHILDREN IN A FEW MOST GENERALLY EMPLOYED METHODS AND THE ADMINISTRATION OF A NORMAL CHILD'S FOOD.

F. Germsheim (*Jahrb. f. Kinderheilk, 1897, xlv, 2 and 3*).—As a practical result of minute experimentation, G. offers the following axioms:

1. We are better able to secure an even distribution of the fat in milk to the different feeding portions, with the bottle apparatus, than when milk is kept any other way.

2. Without particular care in the filling of the bottles a great variation may, however, be found in the single feeding portions. These variations can only be avoided by shaking and pouring together the milk before filling it into the bottles, followed by the immediate filling into the bottles.

3. In keeping the whole portion of milk to be used in the cooking pot, according to Biedert, and also according to Flügge, Heubner, and others, as in the pot-apparatus of Escherich and others, the individual portions taken out at intervals, will contain very variable quantities of fat.

4. These variations may be reduced to a safe quantity by moving the pot strongly in a circle on a surface, parallel with the ground; the pot should not be filled over one-half.

5. On the ground of experiments undertaken by Feer and those made for him by Sior and especially by Langermann, Biedert has recommended this enamelled pot, which is supplied with a cover for the poorer class, as a practical measure, equal to other methods of preserving the milk, with the suggestion, that by retaining the milk in the pot, which has also been sterilized in the cooking, contact infection is avoided.

6. The fear could not be altogether shaken off, that there may occur

a greater germ infection and growth by this method of mixing the milk (see paragraph 4) in which extensive contact with the walls of the pot and admixture with the air contained in it as well as a mixture of the upper layer with the rest takes place, on which, at any rate when the lid is slightly lifted for pouring out a portion, a few germs may enter and become propagated. This fear has been removed by these experiments.

7. Comparing these, we find that all modifications of sterilizing the milk at home, the cooking of it in pots, with and without circulating milk cookers (circulations, milchkocher) and apparatus for keeping it from running over when cooked long; the cooking of it in bottles, with or without a hermetic cutter-off of air (Escherich's Saugstopfenverschluss); the cooking of it for the space of forty-five, thirty-five, and ten minutes according to v. Stark; the filling of it hot into bottles after the oldest method of Riefenstahl (improved by Biedert by cooking it and keeping it cool), have shown such slight important differences that they may be looked on practically as of equal value.

8. This last conclusion receives its deciding support by the fact that with the employment at the same time of all the methods of sterilizing the milk, above described, a number of very susceptible children were fed without their experiencing—even though the experiment was made in summer—any disturbance of health.

9. Whether practical results will be obtained from this demonstration that filling the milk in bottles hot, as recommended by Riefenstein, is sufficient security, is perhaps a question of conveniency and cheapness, at any rate, small pots should be used in place of bottles for each individual portion. It appeared interesting, however, to determine that really the question of the single-bottle apparatus (though with Biedert's modification of keeping it cold afterwards), had really been already satisfactorily solved by Riefenstahl's method.

10. It is worthy of note, that the single bottles which were slowly cooled in the air, did not deteriorate bacteriologically or otherwise, as we would have expected from Flügges experiments.

11. It is true that these experiments were undertaken in a summer which was not very hot, so that the high temperature which should be avoided, according to Flügge, was not long maintained, and after this the bottles were kept in a cool place.

12. The individual bottle apparatus is more reliable and to be preferred, where we are not sure that the person entrusted with the artificial feeding is not clean and punctual in handling the pot, and where it is of great importance to be safe from succeeding contamination. When used intelligently, the pot is wholly sufficient and more convenient.

13. The examination of our milk preparations and those of a few dairies again proved that at the present time, under the circumstances which now control the whole field, a perfectly sterilized milk is nowhere employed.

14. The final result, where our present methods of sterilization do not sterilize unconditionally, will mainly hinge upon the following: (*a*) whether any, and how many resisting organisms get into the individual bottles; (*b*) with what certainty the bottles had been freed by previous

cleansing, of such germs as had developed in their interior and in their rubber closing apparatus.

15. We believe to have found, that bottles purposely contaminated, after having been cleansed by Soxhlet's bottle brush and boiled for twenty minutes in a 12½ per cent. solution of soft soap followed by rinsing with previously boiled hot water, will be perfectly steril.

16. The rubber stoppers, caps, etc., should also be boiled in this soap solution, as also the bottle brushes, which we found to be prolific carriers of bacterial growth.

17. Institutions for the milk-cure, who wish to sterilize milk in large quantities, are recommended to employ this boiling process daily, private institutions as frequently as possible, at least once or twice a week. Approximately a 12½ per cent. solution may be made with two large tablespoonfulls of soft soap and four liters of water.

18. The pot in which the milk is cooked should also be sterilized with this soap solution just as frequently. The pot must be frequently examined whether the enamel or glaze be perfectly intact.

19. These new experiments are to be look on as a continuation of those made by Langermann in the laboratory of the Bürger Hospital at Hagenau, under Professor Biedert, and as confirming previous ones.

PEPTONURIA IN SOME OF THE ACUTE INFECTIOUS DISEASES OF CHILDREN.

C. Cattaneo (*Jahrb. f. Kinderheilk, 1898, xlvi. 3 and 4*) examined for peptone the urine of twenty-five children of whom six were suffering from neasles, five from scarlet fever, thirteen from diphtheria, and one from erysipelas. Only those cases in which the heat, the potassium ferrocyanide and acetic acid and Heller's tests for albumin were negative, were used for the peptone tests. The urine was examined inside of one half hour after passing, in order that all sources of error from decomposition might be avoided.

In no case was there any condition such as suppuration, intestinal disease, etc., present which might cause peptonuria independent of the infectious disease. In all but two cases, peptone was present in the urine on the first day, gradually disappearing (present on second day in ten, on third in seven, etc.). In one of the two cases in which it was absent on the first day it appeared on the second. The author explains the regular appearance of peptonuria on the first day by the fact that the children each received an antidiphtheritic serum inoculation on admission. As a result of 123 examinations made in the twenty-five cases, twenty-nine being positive, no practical conclusion can be drawn. The appearance of peptone was irregular and in no way related to the severity of the case. In one child only, did peptonuria occur constantly; this was a mild case of measles in a child with very severe rickets. As far as the author knows no investigation in this line has been made in rachitis, but he thinks it offers a very promising field of work.

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ORIGINAL ARTICLES

PRELIMINARY OBSERVATIONS ON THE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP BY THE LORENZ METHOD OF FORCIBLE CORRECTION WITH THE REPORT OF A SUCCESSFUL CASE.

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PHOTOGRAPHS 1 and 2 illustrate a cure of congenital dislocation of the left hip by the Lorenz method of forcible reduction. The history of the case presents nothing of particular interest except that it is fairly representative. The patient is a female, the younger of two children; the labor was normal and no disability was suspected until the child began to walk, when the limp and the protruding abdomen attracted the mother's attention. The family physician was unable to explain the peculiarity although he assured the parents that it would be outgrown, but as the symptoms

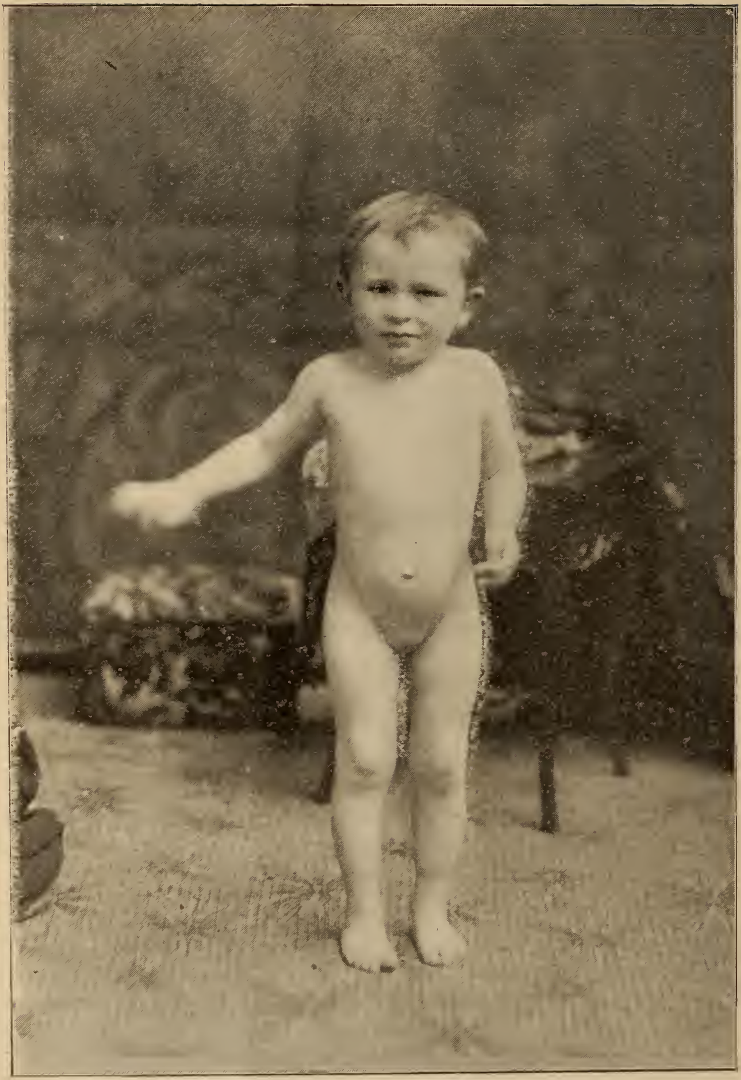

FIG. 1.

A cure of Congenital Dislocation of the Left Hip, by the Lorenz method of forcible replacement.

Photograph taken eight months after the operation.

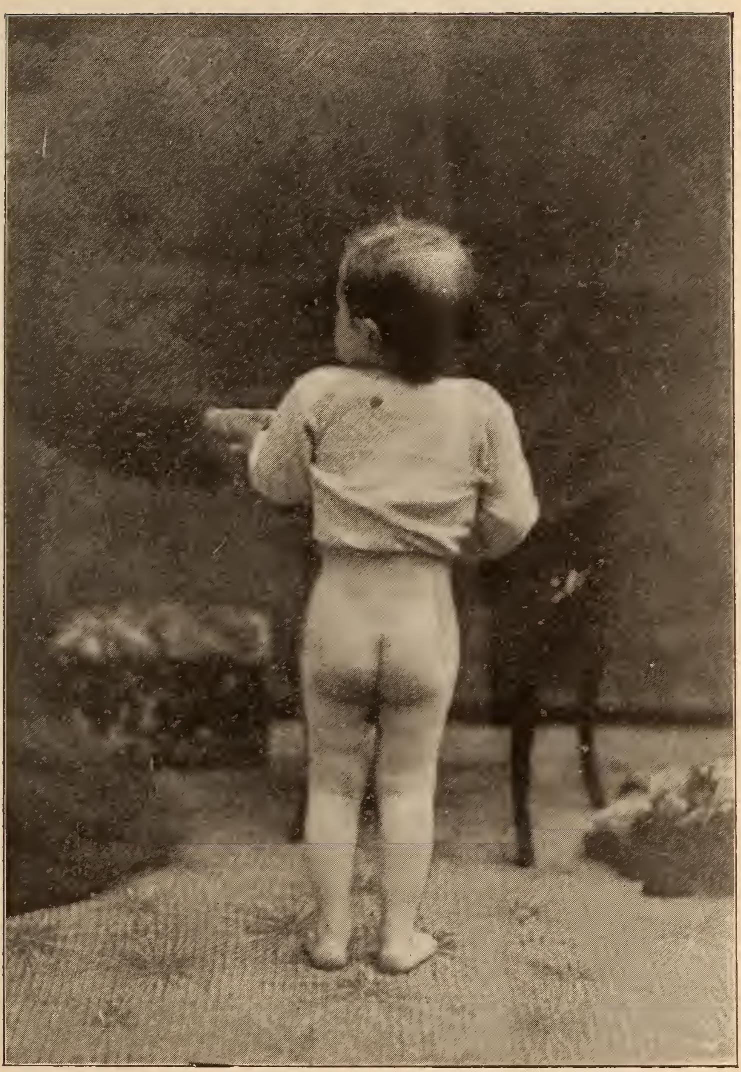

FIG. 2.

Rear view of the same patient.

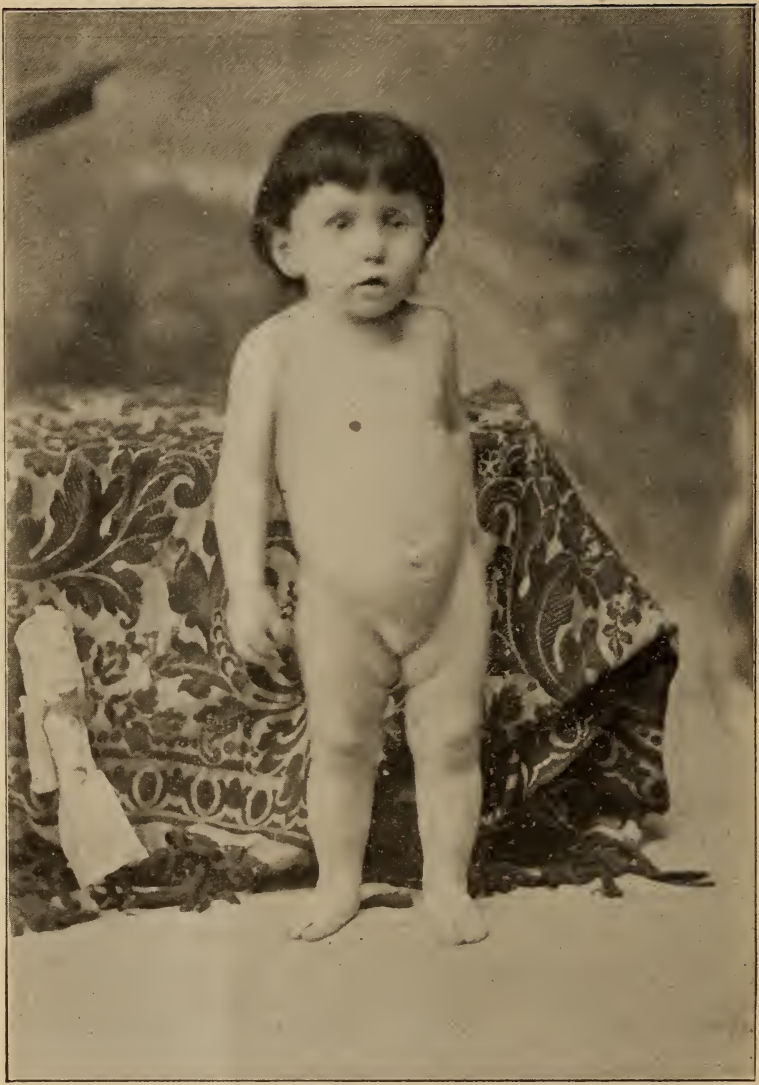

FIG. 3.

Congenital Dislocation of the Right Hip, illustrating the inclination of the body toward the shorter leg. Age, twenty months.

Operation December 17, 1897. Still under treatment.

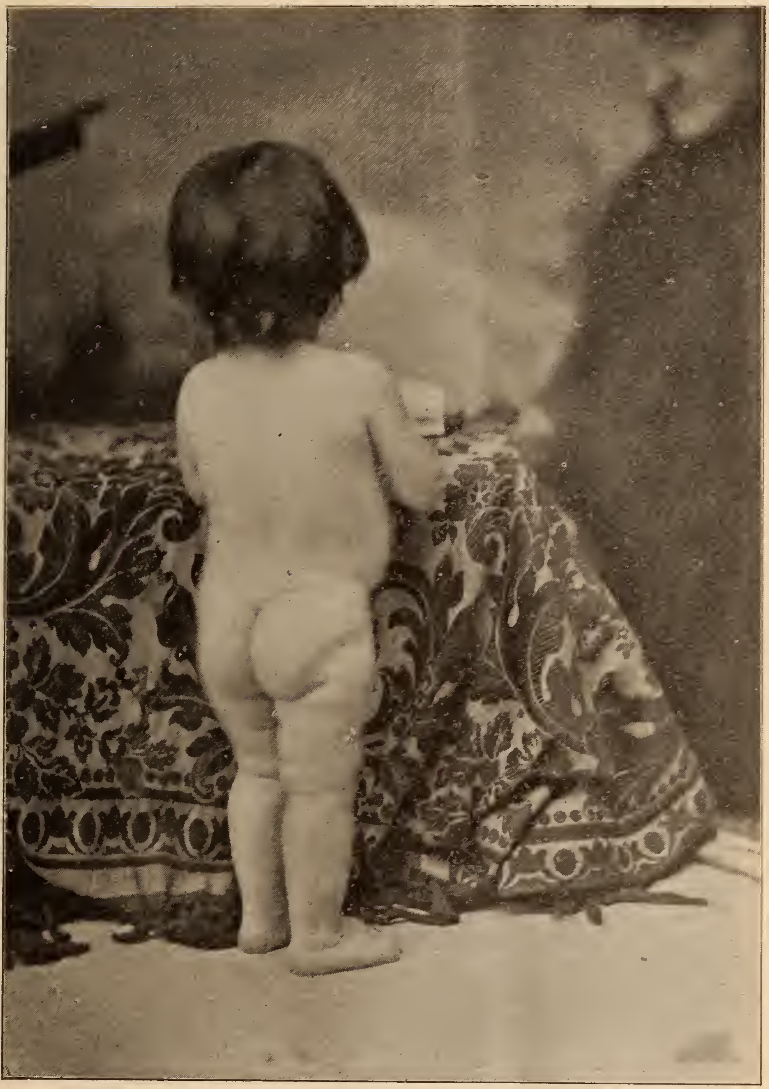

FIG. 4.

Rear view of the same patient, illustrating the change in contour on the affected side

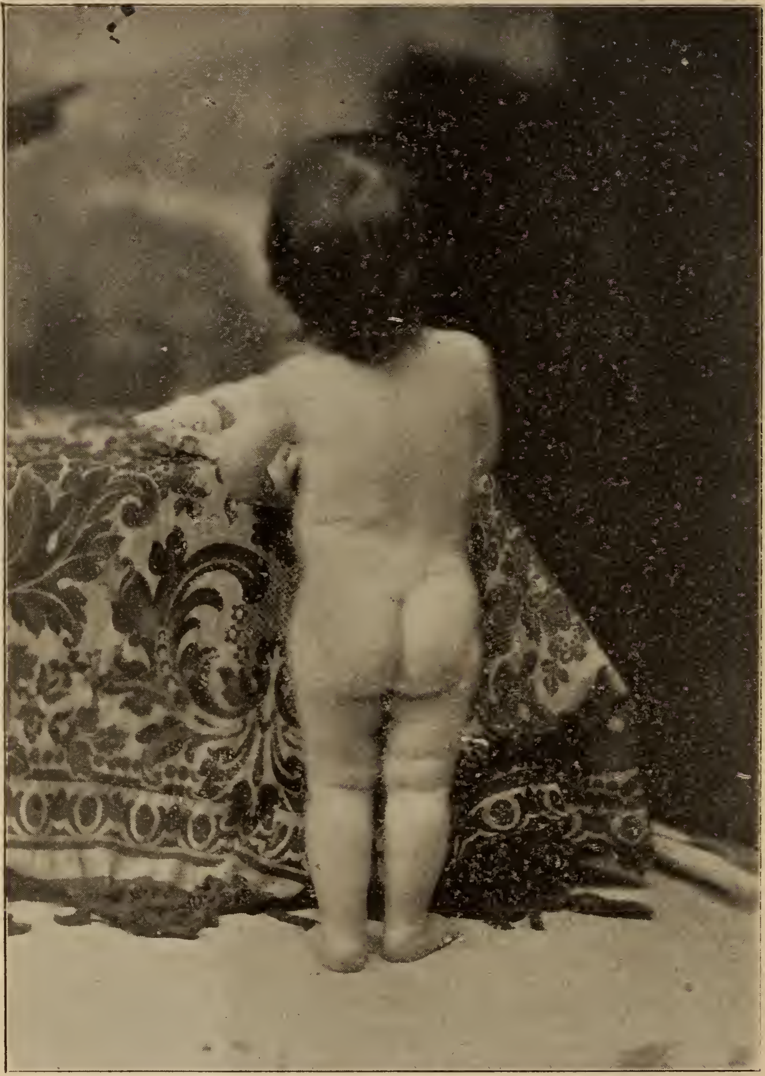

FIG. 5.

The same patient, illustrating the lordosis.

became more noticeable the mother took the patient to a hospital in New York, where it was treated for rhachitis. At another dispensary the mother was assured that the child never had rhachitis. From still another institution she was referred to the Hospital for Ruptured and Crippled, where the patient was examined in April, 1897. The case was one of typical congenital dislocation of the hip. The affected leg was three quarters of an inch shorter than its fellow, there was the usual forward and downward twist of the pelvis, and thus the increased lordosis and prominent abdomen that had been mistaken for rhachitis. The child was in good condition, and being but eighteen months of age, the case seemed a particularly favorable one for the Lorenz operation. This was performed on the nineteenth of the same month. The plaster spica was renewed from time to time until the following November, when it was removed. The joint was supported by a roller bandage for a few weeks, but since December, when the photographs were taken, absolute freedom has been allowed. There is now no sign of deformity, no limp or disability. The child was presented at the December meeting of the Surgical Section of the New York Academy of Medicine, and again, in March, before the Orthopedic Section, where the perfection of the cure was further assured by the fact that it was impossible to determine on examination which of the legs had been operated upon. This case is one of a series of seventeen, treated by this method, of which a report is to be made when sufficient time has elapsed to indicate the proportion of successful results that may be expected from this treatment. The youngest patient was eighteen months old, the oldest seven years; sixteen were females, one was a male; in sixteen, the dislocation was one of femur; in one, of both; in three cases, the displacement was anterior. This case is presented because the operation is a new one, thus a positive and authenticated cure may be encouraging to other workers in this field.

The most important element in success is early treatment, before the changes about the joint have made cure, by this or other means, difficult or impossible. For there can be but little doubt that the most important abnormalities in the shape of the neck and the head of the bone, in the capsule and in the surrounding muscles, that are observed in older children treated by the open method, are, in great degree, the result of the

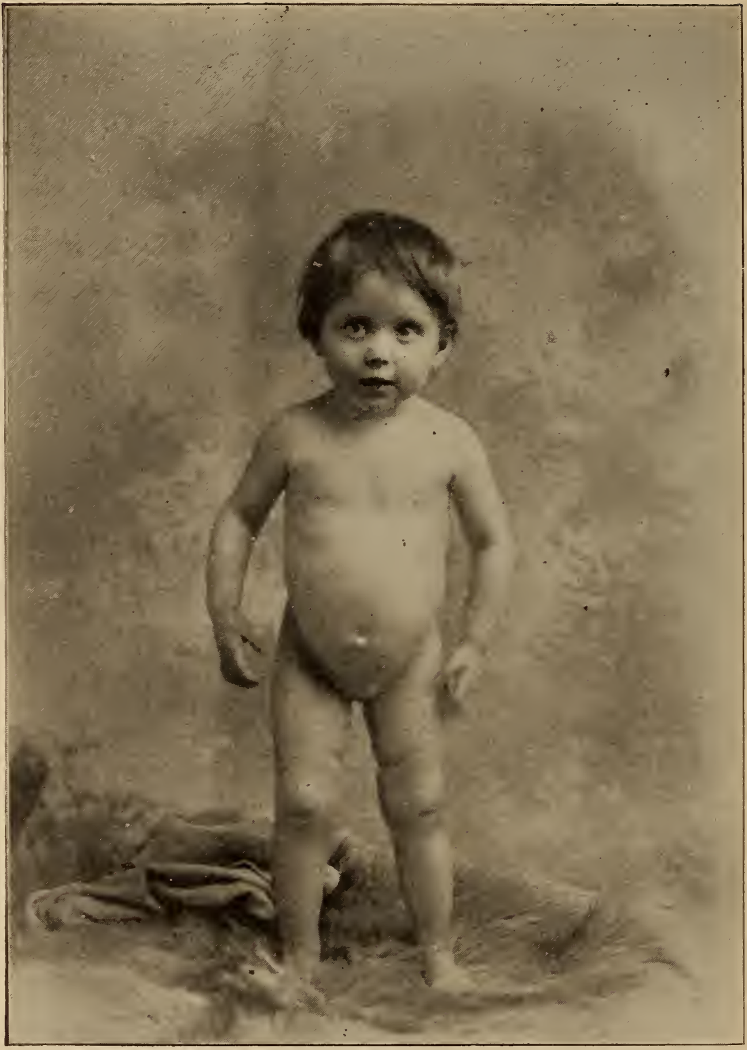

FIG. 6.

Congenital Dislocation of the Left Hip at an early age, eighteen months, showing the lordosis and the inclination of the body.

Operation November, 1897. Still wearing the plaster bandage.

accommodative changes that inevitably follow deformity, disability and abnormal function, at this susceptible period of life. An early diagnosis is thus of the utmost importance and it would seem that it should be made without particular difficulty. A child, whose hip is dislocated, limps when it begins to walk; a persistent limp always has a cause; it is never outgrown, and if it is not attended by pain and is not caused by paralysis or evident deformity, it is almost pathognomonic of dislocation.

On inspection, it will be noticed that the body inclines somewhat toward the shorter leg and that the abdomen is unduly prominent. Measurement will demonstrate a shortening of half an inch or more, explained by the elevated and prominent trochanter, the "lump" that often attracts the attention of the mother; and if the thigh be flexed and adducted to the extreme limit, the head and neck of the displaced bone may be easily palpated beneath the gluteal muscles. If the dislocation is of both sides, the limp is replaced by a characteristic waddle, otherwise the symptoms are similar although more marked.

It is very evident that replacement can be the only effective treatment of a dislocation, although immediate reposition and restoration of function, as is possible in traumatic dislocation, is out of the question. A rudimentary acetabulum is, however, always present in its normal position, partly filled with cartilage and other tissue; about its margin the capsule is attached, elongated, and hypertrophied at its upper extremity which contains and sustains the head of the femur.

At birth and until the child begins to walk, it may be assumed that the head is in close relation to the acetabulum, but when the weight of the body is borne upon the limb, the capsule is stretched upward so that the communication between the upper part, which contains the head of the bone, and the lower part that surrounds the acetabulum, is gradually contracted until it may become impassible.

(*To be continued in next number.*)

CHRONIC INTESTINAL INDIGESTION IN CHILDREN.*

By S. Henry Dessau, M.D.

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CHRONIC intestinal indigestion, according to my opinion based upon an extensive observation and experience in pediatrics, is one of the commonest disturbances of health to which children are subject. It is therefore surprising that it has not been more widely recognized by authors as a distinct disease-entity, for until very recently its various manifestations and most prominent symptoms have by custom been described and treated as separate diseased conditions without regard to their identical cause.

Chronic indigestion in the adult is usually gastric; in children however the rule is that gastric indigestion is acute in character, while the chronic form is invariably intestinal. This is readily explained both upon anatomical and physiological grounds. The position of the stomach in young children is more perpendicular than transverse to the axis of the abdominal cavity, so that it may almost be compared to a pouch or dilatation of the upper intestinal tract, and there is likewise deficient development of its function in early life. Hence it follows that the contents of the infant stomach are propelled into the intestines proper with uncommon ease, and the greater part of digestion is in consequence carried out by them. The part performed by the intestines in the process of digestion has previously been regarded as secondary in character. Since the report of the operation of entire removal of the stomach by Schlatter and the survival of the patient, there can no longer be any doubt that the intestines can be depended upon alone for the entire act of digestion. Undoubtedly the infant stomach is called upon to perform its share in originating the digestive disturbance owing to conditions peculiar to its histological formation. The muscular fibres of the gastric walls are weak and when we consider the tendency of the average parent or nurse to follow as a maxim "the larger the quantity the larger the growth," quality being a minor consideration, it will easily be understood how exhaustion followed by dilatation of the stomach occurs. The ordinary mind seems impressed with the idea that eating means health, therefore the more a child can eat the more certain the degree of health. This idea pervades every class of society and pertains to every age of the child up to puberty. When food is taken into the infant stomach too often and in too large quantity, either it is hurriedly propelled into the intestines before proper preparation can occur, or it remains in the stomach to undergo putrefactive fermentation, because the weak muscular power of the stomach has become exhausted from too continuous work, without the needful intervals of rest. As a sequence of physical laws, temporary distention and finally permanent dilatation is established with attending impairment of physiological function. From the date of this event in the evolution of the difficulty the entire digestive act goes wrong. It matters not now whether the food is of improper, or of the most approved quality, though starchy foods will undoubtedly increase the difficulty, the result will be the same. The food which at first was hurriedly passed into the intestines without due preparation by admixture with the gastric secretion, is now in addition thereto contaminated with abnormal products of putrefactive fermentation derived from food that has remained in the dilated stomach, unable to empty itself on account of exhaustion. The presence of these abnormal products in the intestines act as irritant agents and when continued from day to day finally establish an alteration of the blood circulation in the mucous membrane, or in other words a congestion. It must be born in mind that this process is necessarily gradual or chronic in its approach and for this reason gives an entirely different clinical picture from an acute process. The mechanism as just outlined will aid in explaining the evil of over-feeding in infants and to a partial extent in older children, for I regard this error as the great source and origin of the chronic indigestion of childhood. This view of the gastric origin of indigestion appears confirmed from the fact that infants who regurgitate or puke the food do not so far as my observations extend, suffer from intestinal indigestion. Nature seems to protect them. The character of the food however must not be overlooked as having an important influence in the causation of intestinal indigestion in children. And more especially does this concern the method of preparation when starchy food is given.

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*Read before the Pediatric section of the New York Academy of Medicine, April 14, 1898.

While there may be an honest difference of opinion amongst pediatricians as to the propriety of allowing starchy foods to children at too early an age, that is, prior to dentition, granting the presence of salivary secretion or the power of the buccal mucous secretion to convert starch into dextrose, there can be no question of the fact that if the starch is not cooked sufficiently long to insure rupture of the cellulose capsule of the starch granule, no ready conversion into dextrose can occur. Under such conditions, which are more likely than unlikely to exist, the starch granule undergoes fermentation in the intestines and in the decomposition of its chemical elements, acetic acid among other products is evolved and plays a leading part as an active irritant to the intestinal mucous membrane. Be the character of the food, however, the most suitable, even the mother's milk, unless the influence of the common evil of over-feeding be recognized and prevented, sooner or later infantile digestion will be deranged and its clinical features well be chronic in form and intestinal in anatomical location.

In older children who may have escaped in infancy the liability to develop chronic intestinal indigestion from over-feeding is increased if a neurotic constitution has been inherited. I have come to the opinion that the offspring of gouty parents are very likely to manifest the neurotic constitution; also those children descended from a long line of neurotic ancestors who may have had gout. In these children, I think, the character of the food, as well as the quantity and method of preparation may be regarded as having an important bearing in the causation and development of chronic intestinal indigestion.

The young of every species of the animal kingdom naturally demand animal food for their best nourishment and growth. But as the child advances in age a mixed dietary best fulfils physiological requirements, the main proportion of which diet should be adapted to what is best for restoring physiological waste force and energy. The carbo-hydrates and hydrocarbons in proper proportions have time and again been proven by physiological experiment to be most appropriate for such need in children. An excess of nitrogenous food on the other hand would in their case prove a luxus of nutrition, as there is in them no great waste of muscular force. Consequently an excess of uric acid in the blood and tissues would eventually be likely to occur, and this in addition to that which is normally found in children of neurotic and gouty parents would certainly have a pernicious influence. For this reason it is a good rule to follow in the nursery, to forbid an abundance of butchers' meat, over-indulgence in which can only tend to hasten the development of chronic intestinal indigestion through furnishing an excess of uric acid, which, entering the general circulation acts as an irritant to the vaso-motor nerve centers, both directly by alteration of the blood circulation in the areas they control, and indirectly through creating a condition of extreme sensitiveness to any additional irritant affecting outlying areas. The ready susceptibility to coryzas from sudden changes of temperature or to enuresis from the presence of uric acid crytals in the urine are familiar illustrations of the latter.

In a limited number of cases. the seat of the intestinal disturbance may be confined to particular portions of the canal and perhaps it is on this account that the affection has been casually referred to by Rotch as "duodenal indigestion." I prefer, however, to regard the entire length of the intestinal tract as being involved in the disturbance, as a rule, which view is borne out by the clinical symptoms.

It may become manifest in the course of this article that the lower bowel will often show signs of involvment, may be of a secondary nature, from both direct and reflex irritation. I refer to prolapse of the rectum and vulvo-vaginitis.

In considering the pathogenesis of chronic intestinal indigestion in children, it will be necessary to bear in mind that the result of the action of foreign or abnormal matter, as the stomach contents of over-fed children before described, upon the mucous lining of the intestine is of far greater intensity in infants and children than in adults. That is to say, an increased flow of mucous secretion, which normally is greater and contains a larger proportion of mucin than in adults, is more easily produced. This is due to certain histological laws which provide the connective tissues with an increased amount of mucin for the nourishment of basement membrane cells. Hence it will be readily understood how an excessive secretion of mucous, rich in mucin will be produced in the intestinal canal from the action of even slight irritants. This increased amount of mucin in the connective tissues of the young of the human species has its analogue in certain animals of the lower order, as the calf and pig, in the larger proportion of gelatine found in their connective tissues. The great susceptibility of children to infectious diseases involving principally mucous membranes, such as diphtheria, measles, and pertussis, is in a measure explained from the fact that children furnish a large amount of mucin in the mucous secretion which is a natural medium for the growth of the bacilli of these diseases. It also explains in a measure the immunity of older individuals to contagion or at least a diminished danger of a fatal ending, for where the bacilli thrive best a larger amount of toxin is naturally evolved.

The bacilli that are always present in the intestinal canal, as the colon bacillus, bacillus proteus vulgaris, and lactic acid bacillus, together with those introduced from without with the food, have a most excellent medium in the profuse mucous secretion so rich in mucin, in which to thrive to the highest degree, and it is reasonable to believe that this favorable condition for their growth allows them to acquire a certain amount of virulence. Granting this conception of the pathogenesis of chronic intestinal indigestion to be true, it can scarcely be denied that sufficient toxins or tox-albumins, according to Mathieu, are produced in the intestinal canal, which, becoming absorbed, give rise to a group of symptoms which we recognize as an intoxication of auto-infection. It may also be possible that these organisms or enzymes are chiefly responsible for the abnormal decomposition of carbo-hydrates, which liberating an excess of acetic and carbonic acid in the intestinal tube, not only increases the normal flow of mucous secretion but at the same time partially coagulates it on account of the large proportion of mucin contained, rendering it thick and tenacious, thus adding another factor to the difficulty of the normal mechanism of intestinal digestion. Moreover, according to Buchman, the effect of the large amount of carbonic acid gas liberated is to produce a paralysis of the intestinal tissues, especially the villi of the lining coat. The combined deleterious agency of the altered mucous secretion and paralysis of the villi now plays a highly important part in preventing contact of the food with the intestinal juices and at the same time interferes decidedly with peristalsis of the intestine, so that further fermentation followed primarily by spasmodic contraction and secondarily by distension of the bowels results, with attending constipation, the acknowledged abhorrence of pediatricians.

Furthermore. the increased amount of altered mucus provides a congenial nidus or natural soil for the development of entozoa, the ova of which are liable to be conveyed into the body through drinking water or certain uncooked vegetables, as lettuce, cabbage, etc. The presence of intestinal worms form a complication of chronic intestinal indigestion in children to which the general symptoms are often ascribed, but as Eustace Smith well says, "it is to the digestive disorder and not the entozoa only that the symptoms are really due."

Children who have suffered previously from chronic intestinal indigestion and who become victims of an infectious disease, have their symptoms markedly aggravated while others who may have been formerly free are thereafter more easily disposed to develop the disorder. In fact, Eustace Smith, calling chronic intestinal indigestion "Mucous Disease," attributes its origin principally to the influence of an attack of pertussis, as he says it is often observed as a sequence of this disease. In my observations only a limited number of cases have presented such a history. It would appear that the invasion of the mucous membranes of children by bacilli of infectious diseases has the remote effect of influencing in some unknown way the disposition of these membranes to secrete an abundant flow of mucus for an indefinite period thereafter.

In describing the signs and symptoms of chronic intestinal indigestion I shall take the liberty of quoting freely from the article on mucous disease in Eustace Smith's work on diseases of children. These symptoms refer mainly to children who have completed their first dentition, the disorder in infants, of course, not having developed to the same extent. The general appearance of the child is one of disturbed nutrition. It is languid and pale or has a dingy, sallow complexion. The circulation of the extremities is often poor; the hands and feet in older children being cold and blue. There is often some discoloration under the eyes. The skin becomes rough and harsh over the arms, chest and abdomen and in advanced cases there is loss of flesh. The mother will state that the child becomes easily tired and there is frequent deep sighing respiration. There is an irritation about the nostrils and anus and picking at the nose or rubbing the seat will often be noticed.

The sleep is restless and disturbed. The child tosses his body and kicks off the bed clothes, grinds his teeth, and either talks in its sleep or has attacks of night terrors, when he wakes up in a violent panic, sometimes leaping out of bed. There is a history of suddenly turning ghastly pale as if about to faint, in fact there are often fainting spells. A curious irritability of temper is a characteristic feature. The child is capricious and fretful, often crying without cause. It will quarrel needlessly with companions and is sometimes quite a torment in the nursery. The appetite may be fairly good, but for the most part a little food at the beginning of a meal satisfies the child, as the discomfort of abdominal distension or pain soon follows the first few mouthfuls and interfers with further appetite. Thirst is often noticed and occasionally a craving for acids. The abdominal pains are often a prominent symptom. The attacks are sometimes very severe, coming on suddenly during the evening or in the early morning before breakfast. They are usually referred to the umbilical region and travel across the abdomen to the left side or splenic flexure of the colon. Occasionally they are located over the hepatic flexure of the colon. The tongue presents a peculiar and characteristic appearance. It has a moist, glossy, gum-coated look, is often covered with a thin gray fur, thicker at the base, and the papillæ at the side although not prominent are unusually distinct. Often there is a denudation of epithelium in sharply defined patches, the fungiform papillæ in the stripped area being large and prominent. This condition of the tongue, only in a more exaggerated form, has been described by Butlin as "wandering rash of the tongue," its origin not being certain; but from close observation based upon the study of numerous cases, I am convinced that it belongs to the chronic intestinal indigestion of children. The urine is at times cloudy with phosphates or contains large quantities of uric acid and oxalate of lime crystals, and indoxyl potassium sulphate which is converted into indican by Jaffe's or Obermeyer's test. Herter in a recent article in the *British Medical Journal* attributes an excess of the latter to a greater increase of the colon bacillus. There is no regular progression of symptoms. Sometimes they are better, sometimes worse. The patients may be subject to intercurrent attacks of acute gastric indigestion attended with mawkish breath, a moderate rise of temperature and general febrile symptoms lasting several days. There may be at these times spells of vomiting of considerable quantities of thick mucus with looseness of the bowels, the movements containing thick mucus apparently passed at the end of stool. As a rule however there is constipation and the stools are coated to a greater or less extent with mucus. In a few cases I have seen the stools containing sand-like matter consisting of phosphates and carbonate of lime, resembling as Ewald says "frog spawn." In the infant, constipation is one of the chief symptoms. The stools are pasty or sticky in consistency and light yellow in color. There is rarely any mucus present. Prolapse of the rectum is a frequent complication of severe forms of constipation and I regard this manifestation, as well as others to be later mentioned, as due to the general condition, from the fact that unless of very long standing it disappears without any other treatment than that directed to the state of the entire intestinal canal. Neither do I pay any special attention, other than that to be mentioned under the head of treatment, to such complications as night terrors, enuresis, catarrhal vulvo-vaginitis or peculiar reflex conditions as cough or weakness of definite groups of muscles,* after other influences as preputial adhesions in enuresis or an infectious source in colpitis have been eliminated. A dry, hacking cough sometimes encountered in advanced cases may possibly give rise to a temporary suspicion of pulmonary tuberculosis, especially as the patient at this period is losing flesh and color, and is first seen while having a rise of temperature. This suspicion may be soon allayed however when it is found that the evening rise of temperature is not steady and prolonged as it invariably is in tuberculosis. Moreover if there is serious doubt the tuberculin reaction may be employed without harm. (See Dr. Brown's article in Pediatrics, March 1, 1898).

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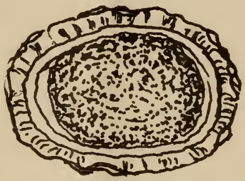
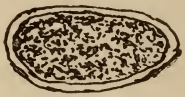
*I saw the following unique case several years ago. A girl thirteen months old who had just begun to walk by holding on to pieces of furniture was noticed suddenly to refuse to stand upon her feet, the attempt causing her to cry as if in pain. Careful and repeated examinations proved that there was no affection nor injury of the joints or muscles. The child looked over-fed, had a large belly but otherwise no sign of rickets, and upon close inquiry this proved to be the case. Her diet was reduced in quantity and regulated and within a few weeks she resumed her attempts at walking and soon after could walk alone. She later on developed more marked symptoms of intestinal indigestion and though now four or five years old does not improve, owing to parental indulgence.

Whenever the presence of worms in the intestinal canal are suspected and none have been seen expelled, it is well for the purpose of a definite diagnosis to pass a male elastic-web catheter into the rectum, when sufficient matter can be brought away in the eye of the catheter for examination under the microscope to determine the presence or not of ova. These are readily recognized with a low power lens: that of the ascaris being large and round, the oxyuris smaller and oval in form.





The group of symptoms associated with chronic intestinal indigestion of children which most nearly resemble the clinical picture of an auto-infectious intoxication, are undoubtedly frequently mistaken for a so-called irregular type of malaria, and this mistake has the sanction of tradition so strongly impressed upon it that it has almost led many good observers to believe that an irregular type of malaria can exist without the evidence of the presence of plasmodium in the blood. I believe with Osler and others that we are not justified in making a scientific diagnosis of malaria without the testimony of the plasmodium. Besides this, there is in chronic intestinal indigestion no feature of periodicity in the symptons, which is characteristic of malaria, neither is it limited to season, while malaria arising from heat, moisture and vegetable decomposition should by right thereof not be expected in mid-winter.

A striking coincidence, that time may prove to be something more, has been observed by me in the association of adenoids of the pharyngeal vault in young patients subject to chronic intestinal indigestion. It was mentioned in an earlier part of this paper that it was possible for an excess of uric acid in the blood, as a result of overfeeding with nitrogenous food, to influence the circulation in certain local areas, through the irritant effect of the uric acid upon the vaso-motor centres controlling those areas. It seems to me that this is more than likely to occur in reference to the mucous membrane of the naso-pharynx in subjects of a lymphatic or strumous constitution who are affected with chronic intestinal indigestion. Certainly it is well known that these patients contract a catarrh of the naso-pharynx more easily than others, and not a few present the same group of reflex symptoms found in chronic intestinal indigestion, even after adenoids have been removed. I refer more especially to enuresis which has been considered by the laryngologist as a possible manifestation of adenoids. Other symptoms, as sudden attacks of difficult respiration and nervous cough, which were not relieved by the removal of existing adenoids, have been noticed by Mulford.§ In regard to enuresis the general disorder of digestion that gives rise to this manifestation makes it possible for adenoids to be developed.¶

Diagnosis must depend upon exclusion and the history, together with the clinical picture which the manifestations and symptoms present.

Although chronic intestinal indigestion of children is so common a disorder, it is not so easily gotten rid of when once well established. This fact should be most vigorously impressed upon the parental mind, for after all, more depends upon the faithful execution of precise instructions in the management of diet and other hygienic requirements than upon any remedies the physician may prescribe, though these will always prove of great assistance.

A few hints are here offered as to the proper management of the quantity of food, and rules to be followed, in order to avoid over-feeding and indigestion in infants. Infants up to four months of age whether wet-nursed or artificially fed should not be given more than four ounces at a feeding nor fed oftener than at two-hour intervals during the day, and four hours at night; six ounces from four to eight months of age every three hours during the day and once at night; eight ounces from eight months of age and upward every four hours during the day and once at night. When a mixed diet is begun the starchy foods—as oatmeal, barley, wheaten grits, etc., should be cooked for not less than one hour, and never more than four ounces or what is equivalent to two large tablespoonfuls be allowed as a portion.

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§Dr. H. J. Mulford, in the *Medical Record*, January 23, 1897, in an article on "Diathetic origin of tissue overgrowth in the pharynx of the child," expresses the view that adenoids in many cases, if not all, are due to an inherited diathesis. In two cases which he gives as an illustration of this view, the urine was of high sp. gr., loaded with urates, uric acid, and oxalate of lime. There was also obstinate constipation. Both were operated upon for removal of adenoids, and were only improved after general treatment, directed towards correcting the nutrition, was resorted to.

¶Although I have seen only a limited number of cases of appendicitis in children, nevertheless, as we have had brought to our notice the influence of intestinal indigestion in adults as an important primary etiological factor in the development of this disease, why may not the same conditions apply to children as a cause of appendicitis? This is a reasonable inference and worthy of further investigation.

With older children milk should form the usual beverage instead of tea or coffee until seven years of age. Stale bread toasted or a crusty roll should be used instead of soft or fresh bread. Meat, not overcooked or fried should be allowed at one meal only, preferably the mid-day meal, and then not every day. Cheese, pastry, and any form of boiled dough should be forbidden. Sweets should be permitted in only insignificant amount and then as a reward for good behavior or the bestowal of a great favor. The child should be watched at table and instructed to eat slowly, chewing the food well before swallowing. It should never be encouraged to eat more than the natural wants of its appetite and should never be compelled to eat what is distasteful to it, though debarred from eating what may be deemed as unwholesome. Drinking of pure water that is not too cold, between meals, should be encouraged. Wines are uncalled for.

For children suffering from chronic intestinal indigestion all starchy foods, as potatoes, corn, rice, and the breakfast cereals, except in the most limited quantity, should be forbidden unless one of the amylolitic ferments, as diastase or taka-diastase is previously added, as these foods only tend to add to the abnormal fermentation going on in the intestines. Coffee and tea are to be condemned, also fats and sugar except in the smallest amount. Meat will be found to agree better for a time, until the digestive functions are restored, but it should be eaten in a solid form, not as soup or extracts.

Hydriatics, in the form of warm, wet packs, followed by a cold sponge douche of 60 °F. to the spinal column and abdomen with brisk friction, as recommended by Baruch, are admirably indicated to promote oxidation of tissue and elimination of waste matter. Cold wet compresses to the abdomen followed by massage along the line of the colon will be found a valuable aid in constipation of infants. Rectal irrigation with Kemp's tube and water at 110 °F. is a most efficient means of relieving the attacks of abdominal pain. In infants the principal indication for the use of drugs will be to relieve constipation and flatulence. For this purpose I have come to regard calomel and bismuth as the only drugs worth calling attention to, though I am well aware that many other remedies are highly prized. When calomel is given in doses from 1/20 to 1/10 of a grain in the form of tablet triturates every two or three hours for from three to five days at a time and again resumed after an interval of a week or ten days, I have never seen it fail to have a happy effect in relieving constipation in infants.

Where there are indications for the use of an intestinal antiseptic, such as excessive flatulence or an eruption of urticaria I regard bismuth either in the form of subnitrate, subgallate or beta-naphtol bismuth as the type of this class. It can be given during the period of the administration of calomel or alternately during the interval in doses of five grains three times daily.

After dentition has been completed I prefer the use of a tonic-laxative, which, in my experience, seems to have been best devised by the combination of cinchona and nux vomica with senna or cascara sagrada. To this tonic-laxative I have long been fond of adding spigelia, a remedy that has a classical reputation as a reliable anthelmintic. But it is not to this effect of spigelia that I attribute its valuable virtues in the treatment of chronic intestinal indigestion in children, for it was well known by the older generation of Southern physicians that in doses less than those employed as an anthelmintic, it was one of the most reliable remedies for correcting the disposition to breed intestinal worms. Moreover, it has the reputation, and I think, with sound claims, of being a tonic to the right heart and perhaps the entire portal circulation. At all events, when added in moderate doses to the tonic-laxative as in the formula given below, it appears to exercise a most beneficial influence in arresting the immoderate secretion of mucus, diminishing flatulence, relieving the sighing respiration and removing the many nervous phenomena.

The formula I employ, which may be called a working basis, is composed of

Ext. Spigelia fld.			
" Senna " āā	f. ʒii	or	7.50
" Cascara fld	f. ʒi	or	3.75
Tr. Nux Vomica	f. ʒi	or	3.75
" Cinchona Comp.	f. ʒiv	or	15.00
Syr. Sarsaparilla Comp. ad	f. ℥ii	or	120.00

M S. ʒi ter in die.

After an infectious disease has aggravated the symptoms, 2 grains of potassium iodide may be added to each dose; where sleep is greatly disturbed as in night terrors, or enuresis is troublesome 3 to 5 grains of sodium bromide can be added to each dose. When the lower bowel appears to be involved and prolapse of the rectum occurs, 3 to 5 drops of the fluid extract of hydrastis may be added to each dose with good results. Eustace Smith recommends with much enthusiasm the compound decoction of alöes of the British pharmacopeia as a tonic-laxative, but I am not acquainted with the preparation.

When anemia has occurred and the tongue is not too much furred the employment of iron in some form is indicated, and I alternate the use of the Spigelia mixture, for a month at a time, with the elixir of the manganate of iron, which is a pleasant and efficacious pharmaceutical preparation. Without the help of iron no permanent impression seems to be made by tonic-laxatives, therefore it becomes a most important agent in the treatment, not only for the anemia but the disease itself.

At any time when the round worms or their ova are in evidence, santonin in ½ grain doses, either with or without calomel and given 3 times daily, or the combination of fluid extract of spigelia and senna in teaspoonful doses night and morning for one or two days will be found efficient as vermicides.

The system of medication in a chronic disorder such as intestinal indigestion, is worthy of consideration. It is well to continue the remedies mentioned, in alternating courses of three weeks with each other, for a period of three months. After the lapse of three weeks or a month they should be resumed for another three months in the same manner and these courses may be repeated with advantage several times.

In presenting the subject of chronic intestinal indigestion in children, it has not been with the idea of introducing any thing new, further than the name, which to the writer seems to aid in bringing many manifestations, that as stated at the outset, have formerly been considered and treated as distinct disease entities, under one common head. In this way a clinical picture is presented which it is hoped can be easily recognized, with satisfaction to the physician and advantage to the patient.

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EDITORIAL COMMENTS

The Training of Epileptic and Defective Children

This is a subject that has been the occasion for much thought on the part of philanthropists and physicians all over the civilized world. It is now generally acknowledged that the practice usually followed of educating these mentally deficient children with and on the same lines as those who are normal is a wrong one in many ways.

An inquiry has recently been made in Great Britain as to the number of epileptic children attending school and also with the object of devising the most efficient and humane means of educating them. The information gathered from these inquiries reveals the fact that the number of epileptic children attending school is only about one per cent. of the total. This, of course, excludes epileptic idiots. It is suggested by the *British Medical Journal* that there are two sources of possible error in this estimate of the frequency of epilepsy among children in elementary school class; the one that some parents try to conceal their epileptic children, and the other that children who have fits at home are sometimes free from them at school. The last fact is instructive as showing that education under proper conditions may be a useful factor in the ameliorative treatment of juvenile epilepsy. That a rational system is needed of treating children who are deficient in mental organization is certain. In many instances, with judicious care and training, they will develop into fairly useful members of society. Up to the present time they have hardly been afforded the opportunity to improve, but being left for the most part to themselves have gone to swell the ranks of paupers and mendicants. One of the chief difficulties to be overcome in dealing with feeble-minded children is that of differentiating between slow development and imbecility. For this reason the British Committee wisely recommend that no child shall be classed as feeble-minded before the age of seven years. After that age and where it has been demonstrated without a doubt that the child is defective; admission into a special school may be asked on behalf of the child where up to that time he has been trained. The plan proposed in regard to these special schools is not to crowd the children together in large institutions, but rather to erect for the purpose small buildings in healthy parts of the country. The fact is recognized that an epileptic child should lead a simple, regular life, as much as possible out of doors, away from the excitement of a great city or from association with many children; in short the nervous system should be kept as quiet as the means at hand will allow. As Dr. Holt remarks, "The education of epileptic children is a subject of great difficulty and is often neglected. There are many reasons why it is impracticable to send them to ordinary schools, and it is very desirable that special schools for them should be established." Dr. Warner says, "No sharp line of demonstration can be drawn between the children feebly gifted and imbeciles on the one hand, and as differentiating them from children simply dull and backward on the other. For practical purposes I think there should be two reports on such a child; one as to mental status, character and habits, prepared by a teacher, with evidence from the parents; the other by an expert, giving a physical description of a child as he sees him." Conditions of health may improve as the children increase in age, but to prevent mental dullness continuing, the fact should be recognized early in life, and the children trained accordingly. Too much stress cannot be laid on the beneficial effects of out-door occupation. Idleness is more harmful to the mentally deficient child than work, that is work within reasonable limits.

Bathing of New-Born Children

Almost from times immemorial bathing of infants has been looked upon as a more or less necessary function and one conducive to their good health in every respect, though possibly in some cases the practice may be carried to excess. Therefore when it is stigmatised as harmful, and when it is proposed to abolish bathing in favor of merely washing, it seems an upsetting of methods firmly established and confirmed by long experience. However in these days one grows accustomed to have one's old time notions overturned, often it must be confessed with results that amply justify the change. Nevertheless so far as the bathing of the new-born is concerned the evidence adduced in favor of its discontinuance is not sufficiently convincing to deter the majority of medical men from still recommending it as an excellent custom from a hygienic point of view. Dr. Naumann, of Berlin, who has recently uttered a warning against bathing infants during the first few days after birth, according to the Berlin correspondent of the *Lancet*, does so on the following grounds: "that the cicatrization of the umblicus is hindered by bathing and that infection may arise from the germs present in the water." His views are strongly opposed by Dr. Schraeder, of Halle, who states that he has examined a series of 150 newly born children of whom only half were bathed in the usual way whilst the other half were only washed. The stump of the umbilical cord was dressed with salicylic powder and cotton wool; in the case of the infants who were bathed this dressing was changed after each bath, but in the case of the infants who were not bathed, the dressing was allowed to remain for several days. The temperature of the children was taken twice a day, the result being that of the 150 children 20 (14.7 per cent.) had a rise of temperature. In twelve cases the temperature rose only once above 38°C (100.4°F). Eight of the twenty-two had been bathed and fourteen had been only washed. There was only one instance in which an affection of the umbilical wound appeared to be the cause of the fever and this case occurred in an infant who had not been bathed. In nine instances the umbilical stump suppurated, but once only in a bathed child. It fell off on an average on the fifth day in the infants who had been bathed but somewhat later in those who had not. As for the influence of bathing on the weight of the infant, Dr. Schraeder states that on the tenth day after birth the average increase of weight shown by sixty-three of these infants was 140 grammes for thirty-two who had been bathed, and 132 grammes for thirty-one who had not been bathed. At the same time it was found that nineteen of these infants had the same weight as at birth; nine of them had been bathed and ten had been washed. It was therefore obvious that bathing had no prejudicial influence on metabolism.

The Effect of the Employment of Women upon Infant Mortality

The fact that long hours of labor under unhealthy surroundings are pernicious to the young both morally and physically is patent to everyone, but there is another point of view from which the employment of women should be regarded. That is its effect upon infant mortality. This is a matter which it is difficult, almost impossible to gauge in all its bearings. An attempt to get at the root of the evil has lately been made in Great Britain, by a Miss Callet, who has given the results of her efforts in a paper based upon an analysis of the statistics of the occupations of females in the United Kingdom. It is freely admitted in this paper that the whole question of the employment of married women cannot be settled by statistics, and many points bearing upon the subject have been passed by, but the important question of how far the health of infants is affected, by the employment of their mother, is fully entered into and many interesting facts are brought to light. It has always been the popular belief that the highest rate of infant mortality is in those districts where women are most largely employed in outside work, but according to Miss Callet such is not the case. She, from the result of her investigations, is of the opinion—while admitting that the employment of women with young children is an obvious evil—that the factory employment of women is not the main cause of the excessive rate of infantile mortality in the industrial centers. The growing number of premature births had been attributed to the increasing employment of women. It is, however, pointed out that in the purely agricultural counties of Eastern England the death rate from this cause was higher than in any other part of the country. Miss Callet says there seems "to be a kind of correspondence between employment of women and girls and infant mortality, but is this a relation of cause and effect. When it is remembered that no account is taken of the kind of employment or conditions of work, whether the majority employed are married or single, well paid or ill paid, we may well hesitate to come to a conclusion on such slight evidence." It may be stated, however, without fear of contradiction that when a women has very young children that those children are much more likely to thrive under her personal care than under other conditions. Therefore, unless she is absolutely compelled to work outside it will greatly conduce to the well being of the children for her to remain at home:

SOCIETY REPORTS

NEW YORK ACADEMY OF MEDICINE.—SECTION ON PEDIATRICS.

Stated Meeting, April 14, 1898.

J. Henry Fruitnight, M.D., Chairman.

Joined Twins—A Thoracopagus Monster.—Dr. J. Barsky presented such a specimen. It was the mother's first labor, occurring about a year and a half after her marriage. The diagnosis of twins was quickly made, and various ineffectual attempts were made to deliver. Finally, after consultation, and before the true condition had been diagnosticated, embryotomy was performed on one of the children. The monster was delivered, and then it was discovered that there was apparently only one very large liver and a single stomach.

A Method of Milk Modification Based Upon the Decimal System.—Dr. Henry L. Coit read a paper on this subject, and elucidated the arithmetical calculations by means of the following table:

TABLE OF APPROXIMATE PERCENTAGES OF LACTOSE AND PROTEIDS INTRODUCED INTO MILK MIXTURES WITH CREAM REPRESENTING 10 PER CENT. OF MILK-FAT, BY THE DECIMAL SYSTEM OF MODIFICATION.

		P.C.		P.C.		P.C.
	For introducing milk-fat,	4.00;	Lactose,	1.00;	Proteids,	1.00
Decimal Cream No. 1.	" " " "	3.50;	"	0.90;	"	0.80
	" " " "	3.00;	"	0.80;	"	0.70
	" " " "	2.50;	"	0.70;	"	0.60
	" " " "	2.00;	"	0.50;	"	0.50

		P.C.		P.C.		P.C.
	For introducing milk-fat,	4.00;	Lactose,	1.80;	Proteids,	1.50
Decimal Cream No. 2.	" " " "	3.50;	"	1.60;	"	1.30
	" " " "	3.00;	"	1.40;	"	1.10
	" " " "	2.50;	"	1.20;	"	0.90
	" " " "	2.00;	"	0.90;	"	0.70

		P.C.		P.C.		P.C.
	For introducing milk-fat,	4.00;	Lactose,	0.80;	Proteids,	0.60
DECIMAL	" " " "	3.50;	"	0.70;	"	0.50
CREAM	" " " "	3.00;	"	0.60;	"	0.45
NO. 3.	" " " "	2.50;	"	0.50;	"	0.40
	" " " "	2.00;	"	0.40;	"	0.30

The foregoing is based upon fifty-one analyses by Leeds of average cow's milk from a herd of 500 animals of mixed breeds, made during a period of four years, and represents an average total solids, content of milk-fat 4.50 p.c., lactose, 4.50 p.c., and proteids, 3.75 p.c.

DECIMAL CREAM No. 1.—Gravity cream, 180 cc. (6 fl. oz.) plus water 90 cc. (3 fl. oz.).

DECIMAL CREAM No. 2.—Top-milk, including gravity cream, 300 cc. (10 fl. oz.).

DECIMAL CREAM No. 3.—Centrifugal cream (20 p.c. fat) plus water, equal volumes.

The percentage composition is obtained by multiplying the required total amount in cubic centimeters by the decimal desired. The requisite modifications are secured by combinations of decimal cream, decimal sugar solution, and boiled water. For the proteids, a decimal solution of egg-albumin may be used, or else skimmed milk. The decimal sugar solution is obtained by dissolving 100 grm. of lactose, maltose or cane-sugar in enough water to make one litre, or two ounces by weight in twenty ounces of water. This is far more accurate than by any system of measuring the sugar directly. As egg-albumin contains 20 per cent. of pure albumin, if it be diluted with an equal volume of water, a decimal solution is obtained, and the egg-albumin may be made soluble by the addition of pepsin.

EXAMPLE.—Given a case in which it is desired to give a child six ounces at each feeding, the percentage formula being four of fat, six of sugar, and one of proteids, the correct quantities of the various solutions necessary to make up one feeding are calculated as follows: The feeding = 6 oz., or in cc. = 6 x 30 = 180 cc. To determine the quantity of decimal cream No. 1 needed to give the desired 4 per cent. of fat, multiply 180 by .4, which gives 72 cc. as the amount to be added. By reference to the table, it is ascertained that with this percentage of milk-fat, 1.00 of sugar is introduced; therefore, only 5.00 additional is needed—i. e., 180 x 5 = 90 cc., the quantity of decimal sugar solution to be used. As the necessary quantity of proteids has already been added, as shown by the table, it only remains to add 18 cc. of water to make up the desired total quantity, i. e., 180 cc.

Dr. COIT said that this system made it possible to employ home modification of milk. Fifty samples, taken on fifty consecutive days, yielded 180 cc. of gravity cream after standing for fifteen hours. The advantages of gravity cream were; (1.) Its uniform freshness; (2.) uniform fat content; (3.) the emulsion of milk-fat has not been subjected to mechanical agitation; and (4.) the ease with which it is standardized by the addition of water.

Dr. LE ROY M. YALE said there was a real demand for a simple method of home modification, but unless it were free from complicated arithmetical formula, it would fail of general adoption. In country places, where the milk of a single cow had to be used, he had found it convenient, in practice, to consider the strippings as a double-fatted milk, and to estimate the percentages accordingly.

Dr. W. P. NORTHRUP said that in obscure cases he had recently secured good results by keeping the percentage of fat rather low, and gradually increasing the proteids. It might be stated in a general way, that if an infant vomits or spits up the food a good deal, it is an indication that the fat percentage is too high; if the stools were greenish, there is too much sugar; if the stools are lumpy and curdy, the proteids are in excess. He had come to consider the heating of milk as an unfortunate necessity.

Dr. HENRY DWIGHT CHAPIN objected to the laboratory milk on the ground that the mechanical separation of the cream and its combination into percentage milk by mechanical agitation caused certain undesirable changes in the milk. He was therefore glad that Dr. Coit preferred gravity cream to centrifugal cream. But the system seemed to depend on the use of evening milk, and this alone would prevent the adoption of the method in New York City, where the milk supplied to consumers represented a mixture of at least two milkings. He had long ago given up sterilizing milk, because this superheated process affects both the cream and the casein, rendering them less digestible. In his opinion more would be accomplished in the way of improving infant feeding if a very clean milk could be delivered to the consumer when not more than twelve hours old, than by the mere modification of the milk to suit the needs of the individual infant.

Dr. L. EMMETT HOLT said that he had not found it necessary to get very exact percentages. The chief difficulty at the present time was to obtain a proper knowledge of the indications for varying the proportions of the different ingredients. One common mistake was to give too much fat; another was to continue with a low proteid percentage for an unnecessarily long time. Any one of the arithmetical methods of modification that had so far been proposed was good, but all of them required considerable study before one could use them with facility. He did not believe that centrifugal cream had the disadvantages spoken of by Dr. Chapin.

Dr. W. L. BANER spoke of the advantages of using the old and familiar fluid measures, particularly as the percentage four was an oft-recurring one. Thus, in an eight-ounce mixture, allowing that the proteids in ordinary milk are four, and the fat also four, to obtain a 1.5 proteid percentage, three ounces of milk, or milk and cream would be required in an eight-ounce mixture. The proportions of milk and cream would depend on the fat percentage desired. Using 12 per cent. cream, two and one-half ounces of the cream and one-half ounce of milk would be required. With a 20 per cent. cream, the requisite amount would be represented by half the difference between the fat and the proteid.

Dr. COIT closed the discussion. He said that in neutralizing the acidity of milk he preferred to use the alkaline carbonate to lime-water. It should be remembered that milk-sugar not infrequently contains free lactic acid as an impurity, and that, therefore, the addition of such sugar would unduly increase the acidity of the milk. He agreed with Dr. Northrup that the heating of milk was a necessity, for even his "certified milk" contained 10,000 to 12,000 bacteria to the cubic centimeter. It had seemed to him that the pasteurization of the milk increased the digestibility of the albuminoids.

He had tried various methods of siphoning off the cream from the milk, and had found them all open to objection. The best plan was to use an ordinary siphon, and introduce it to the bottom of the jar. In this way the milk was drawn off and the cream allowed to settle at the bottom.

Chronic Intestinal Indigestion in Children.—Dr. S. Henry Dessau read a paper with this title. (See page 392.)

PRACTICAL NOTES

A Child with Hemilateral Weeping and Complete Facial Paralysis was presented to the Surgical Society in Hamburg October 19, 1897, by Embden. A four-year-old girl received a fracture of the base of the cranium a few weeks before. After the disappearance of the grave general symptoms which were present at first, a right-sided facial paralysis involving the soft palate remained. After her discharge from the hospital, the author found the following conditions present: Paralysis of the three branches of the right facial nerve. The soft palate when at rest is perfectly symmetrical and at this time evenly raised. When the patient cries, copious tears appear on the left side of the face but not on the paralyzed side. The flushing of the face, which normally occurs during weeping, is confined to the healthy side, and the increase of secretion of the nasal mucous membrane, which also accompanies weeping in the normal condition, is absent on the diseased side. The functions of the rest of the cranial nerves, especially those of the sensory and motor branches of the trigeminus, can be positively demonstrated as absent. This case, therefore, may be considered a further corroboration of the view held by Goldzieher that not the trigeminus (as the lacrymal nerve), but the facial in virtue of the fibres leading to the spheno-palatine ganglion through the great superficial petrosal nerve and reaching the orbit and the lacrymal gland as the orbital nerve by the inferior orbital fissure, should be looked upon as the nerve of secretion. It is of interest that the increased secretion of the nasal mucous membrane and the vaso-motor symptoms in weeping seem also to be dependent on the mimetic nerves. The influence on the nasal mucous membrane is found in the perfectly analogous explanation which has been given for the tear-secretion. During a coryza both halves of the nasal cavity secrete with equal power in this child. The disappearance of the paralysis of the soft palate while the other symptoms remained is also noteworthy.

Hysterical Scoliosis.—Another exhibition was that of a child suffering from this disease. After the appearance of pleuritic pains, an anomaly of position was developed in a ten year old girl in which the upper part of the body assumed a position inclining to the right so as to form an angle of about 130° with the lower part of the body. The child had been treated for three months by suspension without benefit. During suspension, which was applied for the purpose of examination, attention was directed to the easy correction of the deformity when in suspension, the faradic brush was applied and energetic suggestive influence was used. A cure resulted after one seance.—*Munch Med. Wochenschr.*

The Duration of the Infectious Period of Scarlet Fever was made a study of by Sames Neech, for which purpose he undertook a collective investigation in the English hospitals. This resulted in placing the minimum period at eight and the maximum at thirteen weeks. It is of interest that swollen glands which had appeared during the sickness, abated before the children were discharged from the hospital. It is also imperative that a thorough cleansing of the nasal mucous membrane be done before discharge from the hospital.

Diphtheria of the Umbilical Wound was met with by B. Pitts in a child which was brought to him after the cord had fallen, with a dirty colored umbilical wound, presenting a reddish zone. Both the mother and a brother of the child were suffering with pharyngeal diphtheria. Cultures made from the pus of the umbilical ulcer yielded pure cultures of the diphtheria bacillus. The child died two days after admission; the larynx and pharynx were both healthy.

Schleich's Infiltration Anesthesia was applied by Dr. Krecke (Munich) in the surgery of children, for example in phimosis, which operation may be undertaken even in very young children, in an absolutely safe and painless manner. The same can be said of hair lip. In tracheotomy this method is very satisfactory to the operator. The patient lies perfectly quiet, the field of operation is plainly in sight, and the trachea may be opened without excitement. The youngest child tracheotomized in this way was four years of age; it did not move in the least during the operation. It goes without saying that the operator must be fully master of the method, must carefully have studied Schleich's directions and have had some training in doing small operations on adults with the method.

Myositis Tuberculosa is a disease of which, up to the present, only sixteen observations have been published. Dr. Ch. Grout has seen two cases. One occurred in a child eight years of age, with Pott's disease, of eight months' duration. The patient received a knock on the upper thigh, which was followed by a swelling, the pus from which caused tuberculosis when inoculated into a guinea pig. The abscess cavity was in the vastus externus muscle, having no connection whatever with any bone focus, and was surrounded by healthy muscle tissue. The second case occurred in a nineteen-year-old patient, suffering with a right-sided scoliosis and numerous glandular tumors of the neck. A tumor existed at the lower third of the left arm for six months. This tumor proved to be a pus-sac in the flexor muscles, having fungous walls, the bone being intact.—*Centralbl. f. Kinderheilk.*

Blepharitis.—Ichthyol ointment in blepharitis is recommended by Darier.

℞	Ichthyol	1 ℥
	Starch, powdered	20 ℥
	Zinc oxidi	10 ℥
	Vaselin	50 ℥

—*La Clin Opthal.*

Diphtheria Bacillus in the Blood and Nervous Centers.—Richardière reported before the society of the hospitals of Paris from four new cases in which the diphtheria bacillus was found in the blood and in the nervous centers. In one case the germs had entirely disappeared from the throat, but were found in pure culture in the bulbar centres. Paralysis was absent.—*La Rev. Méd.*

ABSTRACTS

KOCH'S NEW TUBERCULIN IN LUPUS VULGARIS.

Krzysztalowicz (*Wien. Klin. Wchnschr., Jan. 8 and 15, 1898*) reports a number of cases in which he used the new tuberculin. The general opinion is that lupus vulgaris is tubercular in nature. In favor of this view are the pathological conditions, the presence of the tubercle bacillus, and the causation of tuberculosis after innoculation from an area of lupus. None of the methods of treatment have been satisfactory. Immediately in the publication of Koch's work (*Deutsch. Med. Wchnschr, 1897, No. 14*) Krzysztalowicz began his experiments. He used first a dose of 1/500 milligramme of the solid, in physiological salt solution, increasing until a dose of 10 milligrammes in most and 20 milligrammes in many patients was used. The fluid medium was changed to a 20 per cent. watery glycerin solution. The injections were made into the back, and local treatment of the lupus was limited to an occasional washing with 3 per cent. boric acid solution. The length of treatment was about four months, during which time not less than eighteeen nor more than fifty-one injections were made. Most cases received fifty injections, made at first every other day, later at longer intervals. The general reaction was very slight. In almost all patients, in the course of treatment an elevation of temperature lasting some hours was observed. Other general symptoms occurred simultaneously. No abscess occurred at the point of injection, neither was any eruption noticed. The deceased areas themselves showed in the beginning only slight reaction. At first around the infiltrated spots and nodules, a red border appeared, which later became brown and then disappeared. Ulcerations became covered with epidermis infiltrations decreased, old scars became at first red and infiltrated and later smooth and pale. Nodules grew smaller. Lymph glands decreased slowly in size.

Thirteen cases were treated, ranging in age from eleven to twenty-five years. The disease had existed for from two to eleven years. The author is unable to draw any conclusions except that, although the new tuberculin does not act any better than the old, we have in it a means of healing lupus quickly and without any extreme general reaction. He thinks, however, that 20 milligrammes is not the maximum dose. It is not possible to speak concerning the permanency of the cure at present. The price of the tuberculin is against its general use. Other reports of similar experiments by Bussenius and others are referred to. Bussenius obtained a cure, using from twenty-nine to sixty-five injections. Schultze and Bohland and Slavyk did not have better results. Wörnu and Doutrelepont, on the other hand, praise the new remedy highly.

A CYSTIC TUMOR OF THE SPLEEN IN A CHILD TWELVE AND A HALF YEARS OLD.

A. Baginsky (*Berliner Klin. Wochenschr, 1898, xxxv. 40*) presented a child before the Berlin Medical Society which had been cured by operation of a cystic tumor of the spleen.

History: The girl, twelve and a half years of age, was brought to the hospital in May, 1897, with the history of an increasing tumor in the left side. This swelling had been first discovered shortly after the child had fallen on its abdomen with great force. The patient had passed through scarlet fever and diphtheria during its early childhood, but had been perfectly healthy since then. On examination there was found a marked bulging in the left hypochondriac region which extended over the median line to the right, had a tense, elastic feel, and gave the sensation of fluctuation at its apex. The tumor seemed to grow firmer from above downwards, having a sharp edge at its lower boundary; the sharp, firm border toward the median line presented a deep notch, somewhat above the navel, having a firm feel, exactly like that which is usually presented by large tumefactions of the spleen. The tumor reached about 8 cm. above the lower border of the ribs, strongly pressing forward the lateral wall of the abdomen; it was somewhat lower behind. This whole area gave an absolutely dull percussion note. To the right, toward the liver, this dullness extended over the median line, but a tympanitic zone could be demonstrated between the latter and the liver-dullness, which was rather small. The liver seemed pushed somewhat backward and upward, partly by the tumor and partly by the overlying intestinal coils. The child seemed fairly well nourished, though pale, and the facial aspect was that of anxiety. Palpation of the abdomen, though somewhat painful, was not markedly so, but rather more uncomfortable. Heart and lungs appeared normal, the urine contained slight traces of albumin, no sugar, only single leucocytes and epithelia, no cylindrical casts. A diagnostic puncture was made into the tumor immediately after admittance, and the contents of the fluctuating part of the tumor proved to be a turbid, brown fluid, which, on microscopical examination, showed numerous partially disintegrated red blood-corpuscles, colorless stromata, leucocytes, glistening round granules of various sizes, and numerous large plates of cholesterin. No ecchinococci hooklets were found. With these findings no doubt could be entertained that a cystic tumor, firmly connected with the spleen was present, whose original hemorrhagic contents had undergone changes and, as a history of injury was obtained, one was justified in assuming that the latter was the cause of the hemorrhagic effusion which formed the beginning of the tumor. The increasing growth and the gradual encroachment on the general health seemed to indicate operative interference. The child was operated on by Dr. Gluck, on May 3, who reports the following findings: During the operation about two litres of a reddish brown fluid were removed containing a great number of red corpuscles which, after filtration, presented a greenish red-brown color.

Sp. gr. at 15° c. = 1028. Reaction, alkaline.

Solid constituents = 7.47 per cent; mineral matter, 0.09 gr., = 1.2 per cent. The mineral constituents were chloride of sodium, traces of calcium and phosphoric acid. The solid constituents not of a mineral nature were albumin (serum-albumin and globulin), cholesterin, very small quantities of lecithin, bile-coloring matter, blood pigment, traces of uric acid and fat. Grape-sugar, urates, bile acids, lucin, tyrosin, metalbumin were absent.

The microscopical and chemical examination gave certainty to the previous supposition that the fluid was changed blood. This case is an exceedingly rare one. Baginsky drew the attention of the society to the fact that, even at the present time, where the wound is perfectly healed, the spleen may be felt as a firm, somewhat enlarged organ, adhering to the cicatrix.

CALOMEL IN COMBINATION WITH CHLORIDES OR ACIDS.

Dr. Jovane made the following report at the Eighth Congress of the Italian Society. He has observed that calomel, when brought in contact with chlorides, mineral or organic acids, in the test-tube does not form corrosive sublimate. This was also determined in a dog, in whom a gastric fistula had been established. The author, still further, has administered calomel to sixty children, followed by lemonade made from muriatic, citric or tartaric acid and by strongly salted bouillon, milk, orange juice, and has not seen the slightest disagreeable effects follow. Neither were any anatomical changes whatever found in the autopsies of experimental dogs, and those of two children, who had all been subjected to the above experiments, and had died later from intercurrent diseases.

Based on these observations Jovane believes that the avoidance of ordering calomel together with acids, chlorides and albuminates, rests on a baseless preconceived notion.—*St. Petersb. Medic. Wochenschr. 1897, xxii, 482.*

CHRONIC DIPHTHERIA.

A. Hennig (*Wiener Med. Wochensch, 1897, xlvii. 1606*) denominates all those cases chronic diphtheria in which the characteristic local diphtheritic lesion persists with more or less intensity or is newly formed in a new locality, for a space of time exceeding three weeks. Chronic diphtheria in comparison with the acute form is rather rare; Hennig met with it only twenty-six times (= 1.19 per cent.) among 2,167 cases of diphtheria, and by adding eleven cases of very slowly progressing rhinitis fibrinosa the percentage reaches only 1.6 per cent. The following factors, to which either singly or combined can be ascribed a certain influence on its appearance are mentioned.

(1.) The site of the affection: as especial sites of predilection we recognize the naso-pharyngeal space, the roof of the pharynx, the posterior portion of the nose, and the deeper lying lacuna of the pharynx and tonsils and the fossa of the soft palate.

(2.) Certain constitutional diseases, congenital or acquired, for example, tuberculosis, syphilis, scrophulosis, and rhachitis.

(3.) Acute diseases—for example, scarlatina and measles.

(4.) Predisposition, either individual, temporary or localized.

(5.) Chronic catarrh of the upper air passages, and their sequelæ, especially hyperplasia of the palatal tonsils, of the pharyngeal lymphatics, and tonsil, tonsillar concretions, tonsillar and peritonsillar abscesses, and rhinitis. Rhinitis fibrinosa and Bretonneau's diphtheria, according to Hennig, are in a certain way related to each other. Hennig has observed that in nine out of eighteen cases of a purely typical rhinitis fibrinosa, the membranes persisted at the original site longer than three weeks, and in numerous cases he has seen their extension to the naso-pharynx and the pharynx. We have been accustomed to regard rhinitis fibrinosa and diphtheria both from a clinical and from a pathologico-anatomical point of view, as two distinct affections, until recently the Löeffler bacillus has been both virulent and non-virulent, occasionally found in the membranes of the former, and individual observers have described cases where a typical diphtheria, accompanied by grave constitutional symptoms, followed a typical rhinitis fibrinosa. Hennig enumerates a number of these observations from literature and then enters into the relation of these two affections. He turns his attention in the first place toward clinical observations, mentioning in this relation only those cases of rhinitis fibrinosa which had persisted longer than three weeks, and those in which the pseudo-membraneous deposit either repeatedly formed in the same locality, or spread to the anterior or posterior division of the nose, into the naso-pharynx, pharynx, or larynx, or even to the external integument ot the nose and face, and in which as a sequal to the primary diphtheria a typical rhinitis fibrinosa developed. These cases are perfectly trustworthy, and may be used more safely than cases of shorter duration for answering the question whether rhinitis pseudomembranacea is related to Bretonneau's diphtheria, and if so, in what relation, or whether it is an affection *suigeneris*. The macroscopic-clinical picture, it is true, presents marked differences in a series of cases.

In what disease, however, is this not the case? Take, for example, the various forms of syphilis, tuberculosis, etc. It is true we meet with cases of rhinitis fibrinosa, and nasal diphtheria, which, at the first glance and even on more minute inspection, clinically at least do not seem to be related, but innumerable other cases are met with on the other hand in which we would find some difficulty in assigning to one or the other group of the disease. The extreme cases certainly present on the one side local affections showing no inclination to spread, and producing no marked constitutional symptoms, and no or only very slight subjective symptoms. On the other hand, however, there may be present the gravest constitutional symptoms, severe affections, and great tendency to a rapid spreading of the local affection. Between these two forms there are numerous transitions, and these, as far as they relate to the rhinitis, are discussed by Hennig.

It frequently happens that the membranes and deposits gradually extend from the anterior to the posterior portion of the nose, and at times also involve the naso-pharynx and attack the pharynx, in two cases actually descending into the larynx; at times the process also extended to the anterior orifices of the nose, and involved the alæ nasi. When the chalk-white pseudomembranes, as was usual, were firmly imbedded in the slightly swollen mucous membrane, the erectile tissue, however, occasionally became doughy, strongly infected, bloated, and the membrane of a dirty greyish-white or greenish color, somewhat fetid, would lie loosely upon the mucous membrane.

The retromaxillary glands were, as a rule, somewhat swollen. In a few cases, however, the submaxillary and a few cervical glands also presented a brawny infiltration, and in one case the whole left side of the neck was as hard as a board. Undoubtedly, we also meet here, as in the deposits, with numerous stages and gradations which would, if their beginning and development could not have been followed, never have suggested in their last stage the typical picture of rhinitis.

As regards fever, there was occasionally found a rise of temperature even of a high degree in rhinitis, though the latter, as a rule, runs an afebrile course; now and again febrile would alternate with afebrile periods.

The subjective complaints, as a rule, were not very great as long as the process was confined to a small area, and the swelling of the nose very slight. As soon, however, as nasal respiration was interfered with in a larger degree by the extension of the membrane and greater tumefaction of the mucous membrane, greater complaint was made of the subjective symptoms, for example, frontal pressure, occlusion of the nostrils, more difficult respiration, the impression of a foreign body in the nose, etc. Albuminuria was occasionally observed in mild cases, while it was sometimes absent in severe ones.

Hennig lays particular stress on two cases observed in which paralysis developed, exactly as in diphtheria. In one case a severe paralysis of the palate and of accommodation followed a not very extensive rhinitis fibrinosa in a girl 10 years of age, and in a patient 37 years old, where the process had extended from the choanæ into the naso-pharyngeal space and the pharynx, having lasted seventy-four days, paralysis of the rima glottidis also made its appearance in addition to that of the palate, which only disappeared after treatment by strychnine and electricity lasting for many weeks.

Numerous authors have observed infection by rhinitis fibrinosa, and the infected individuals either contracted a rhinitis fibrinosa or a typical diphtheria. Hennig was able to trace infection among his cases four times, three in one family, and in one case the friend of a boy who came to visit him was infected. In every case a typical pharyngeal diphtheria appeared; in one patient the process ran its course at the same time in the nose as a simple rhinitis fibrinosa. On the other hand, Henning met with two cases in which, after a comparatively slight pharyngeal diphtheria, without demonstrable involvement of the naso-pharynx or of the nose, a rhinitis fibrinosa made its appearance later.

These eleven cases were also examined bacteriologically. Löffler's bacillus was found five times. In five cases it was never seen; in one case suspicious temporary forms were observed; strepto, staphylo, and diplococci were nearly always present.

Among those five cases, virulency was once tested for, which resulted negatively, although this case presented a marked swelling of the glands the presence of albumin in the urine, and was followed by paralysis.

These findings correspond therefore with Hennig's former experiments in diphtheria, in which Löeffler s bacilli or the pseudo-diphtheritic bacillus, was demonstrated in only 57 per cent. of cases.

The following conclusions are drawn by Hennig from his observations:

(1.) Rhinitis fibrinosa is intimately related in a clinical and pathologico-anatomical manner to Bretonneau's diphtheria, and must not be looked upon as a disease *sui generis.*

(2.) Löeffler's bacillus can not be the cause of rhinitis fibrinosa.

(3.) Thus, the view, that Löeffler's bacillus is not the cause of the disease clinically designated diphtheria, has received another confirmation.

(4.) The etiology of rhinitis fibrinosa is still obscure.

(5.) Rhinitis fibrinosa, as well as diphtheria, is influenced by the symbiosis of numerous pathogenic and saprophytic micro-organisms, besides other factors which are as yet unknown.

A CASE OF ACUTE OSTITIS OF A RIB, DURING DIABETES IN CHILDHOOD.

Pflaumer (*Munch. Med. Wochenschr., 1897, xliv, 951*) reported the following case in the Surgical Society in Nürnberg (4, 3, 97):

The patient, a boy eleven years old, previously healthy, was said to have lost weight since January, 1896, and especially during the last few weeks. About a week ago, the parents noticed a swelling on the back; the physician called in at the time found the child suffering from diabetes (the father of the boy is said to be a drunkard, and frequently to have assaulted the child).

On admittance (August 21, 1896) the patient was exceecingly emaciated, and gave the impression of a very sick person. Thoracic organs were normal, the abdomen greatly distended, presenting a great contrast to the other greatly emaciated parts of the body. On the back to the left of the spinal column, on a level with the eleventh rib, occupying about the region of the kidney, was found a swelling of the soft parts, having a diameter of about 10 cm. The skin was somewhat reddened, livid, tender to pressure. On deep palpation distinct fluctuation could be felt below the surface. The patient suffered from continuous thirst, and voided an abnormally large quantity of urine which contained 6.2 per cent. of sugar and much acetone but no albumin. Temperature, 37 degrees, pulse 140 degrees.

On August 22 an incision was made into the fluctuating tumor, under chloroform narcosis. The muscles, were infiltrated with serum. A large abscess, in which the fatty and the fibrous tissue showed necrotic disintegration was found; the pus was greasy, yellowish gray. In examining the abscess more closely, it was found that it entered the periosteum of the eleventh rib, which had been stripped from the bone for about 5.6 cm. The pus found in the periosteum was of the same dirty, greyish-yellow character, the periosteum was also in part necrosed and the bone discolored. The tissue surrounding the abscess presented only slight inflammatory reaction, great relaxation, and bled sharply. The rib was resected to the extent of 6cm and the wound tamponed. Evening temperature, 35.4 degrees, pulse 140, patient very restless. Patient died in coma August 24.

ON MIRROR-WRITING.

O. Seifert (*Münch. Med. Wochenschr, 1897, xliv. 696*), discussed this anomally before the Physico-Medical Society at Würzburg, and his report was based in the first instance on the scholars in the Kreis deaf and dumb asylum at Würzburg and the Badischen deaf and dumb asylum of Baden in Gerlachsheim including altogether 221 deaf and dumb children (142 boys and 79 girls) ranging in age from six to eighteen years. Eighty-nine children (fifty-five boys and thirty-four girls) presented a normal condition of the nose, naso-pharyngeal cavity and the larynx. The changes found in the larynx were one case each of the following: extreme anemia, chronic laryngitis, and atrophy of the vocal chords. Changes in the pharynx; in two cases, uvula bifida; in one, fully developed hair-lip; in twenty, hypertrophy of the palatal tonsils; in seven, atrophic pharyngitis, and in thirty pharyngitis granulosa. Of diseases of the nose; Seifert found thirteen cases of eczema narium, five cases of rhinitis subacuta, eighteen cases of rhinitis atrophica, fifteen cases of rhinitis hyperplastica, fifteen cases of polypi; adenoid vegetations which had to be removed by operative interference were found in nearly 24 per cent. of cases (fifty-three children—thirty-four boys and nineteen girls). In fifty-seven cases the patients were born deaf and dumb, and in forty-two cases it was caused by meningitis, in seventeen, by "convulsions," in fifteen by scarlet fever, eleven by ear disease, in seven each by diphtheria and traumatism, in six each by typhoid and rhachitis, in four by measles, in two by apoplexy, in fourteen cases by diseases whose names could not be obtained; in thirteen cases heredity was demonstrated.

From 121, specimens of writing with the left hand were obtained. Of these twenty-one (= 9.09 per cent) were perfect specimens of mirror-writing, ten (= 8.70 per cent.) were imperfect specimens; these figures therefore are lower than those obtained by others (Cahen-Brach 35 per cent., Treitel 25.8 per cent., or 45.8 per cent. Lochte 27.3 per cent.). Any influence on the mirror-writing from intelligence and talent and especially its quality could not be demonstrated as a rule, neither did sex show any influence.

The vertical writing observed by Leichtenstern in eight children who had been forced to write with the left hand, was not seen by Seifert in any of his cases. Seifert then presented specimens of writing from four patients paralyzed on the right side, two of whom had aphasia; among these, one with aphasia showed mirror-writing.

Out of thirty-four normal adults, four males and four females presented mirror-writing, when writing with the left hand as well as when writing with both hands together. One female produced mirror-writing when using both the right hand and the left hand together; the same was done by two male persons used for the experiment, when they were asked to do so.

If we separate voluntary mirror-writing from the imperfect and from the perfect involuntary mirror-writing, we are justified in looking on the last two forms as falling under a physiological form of writing, which has no psychical diagnostic importance whatever. The question is how far forced mirror-writing should be looked upon as a sign of inferior value is not stated by Seifert.

MIGRAINE OPHTHALMIQUE IN A GIRL FROM AN EPILEPTIC FAMILY.

F. Gutschy (*Centralbl f. innere Medic, 1897, xviii, 793*) reports the case of a sixteen year old girl whose older brother suffered from "grand mal," whose youngest sister was afflicted with epileptic coma, and two of whose brothers died from eclampsia. The patient presented that form of ophthalmic migraine in which, besides the pains of hemicrania and the scotoma, one-half of the face and tongue of the same side as well as the upper extremity became cold and insensible. This phenomenon at times makes its appearance on the right side, again on the left, cephalalgia persists a whole day, scotoma and paresis at the longest for a quarter of an hour. Vomiting never follows, nor are transitory aphasia, paresthesia and paresis present in the lower extremities.

A RARE CONGENITAL ANOMALY OF THE PULMONARY ARTERY.

Glaevecke and Doehle (*Münch. Med. Wochenschr., 1897, xliv, 950*) reported at the Physiological Union in Kiel (May 17, 1897), an extremely rare case of the abnormal course of the pulmonary artery in a new-born child which led to degeneration and a partial displacement of the trachea.

The child was well developed and otherwise perfectly normal. During the first four months of life during violent excitement, especially when crying, a slight sound of stenosis, similar to that heard in croup could be heard on inspiration. When a bronchitis occurred at the age of four months this stenotic sound increased temporarily, and disappeared again after the catarrh improved. During the following two months, the child thrived wonderfully, and seemed perfectly well except that the inspiratory sound gradually increased. This sound not only made its appearance on excitement, but whenever a deep inspiration was taken, and was only absent when the child was breathing lightly. A bronchial catarrh occurring during the seventh month rapidly made the condition worse. The sound could be heard with each respiratory act; inspiratory retraction of the thorax and an increasing cyanosis made their appearance. Hoarseness was, however, absent, and the child's cough was ringing. Attacks of true dyspnea appeared, which became more and more frequent. A trecheotomy, performed as a last resort, did not explain the existing obstruction, nor did it improve the existing dyspnea. The attacks of dyspnea went on, and twenty-four hours after tracheotomy, the child died cyanotic, from, an increasing dyspnea.

Autopsy: Organs normal; the lungs were greatly emphysematous, and the pulmonary artery took an abnormal course. The position of the lungs and the heart was normal, as was also the origin of the great artery of the heart and the branches of the aorta. The pulmonary artery, however, did not divide into a left and right portion. A narrow vessel arising from its trunk passed upward and slightly to the left of the aorta, and entered the descending branch close below the arch. It had a narrow lumen which extended close up to the point of its entrance in the aorta where was found a small depression (ductus Botalli). To the right of the trunk, on a line with the height of the exit of the ductus Botalli was a short vessel, about 1 cm. in length. This divided into two branches, one of which continued to the right, and entered the lung below the right bronchus. The other branch passed from the left anteriorly, to the right, posteriorly and upward, behind the aorta in front of and above the right bronchus where close to the trachea, it turned backward and crossed the trachea obliquely, somewhat downward to the left; from here it took its way between the aorta and the left bronchus, so as to cover the upper half of the latter, half way overlapping it, and thus entered the left lung behind and above the left bronchus. This branch of the pulmonary artery was plugged by a recent thrombus. The trachea was compressed, and the left bronchus presented a small slit, the cartilages were unusually soft.

The dyspnea, was therefore explained by the course of the left branch, between the trachea, left bronchus, esophagus, and aorta, by the pressure exerted on these organs. In catarrhal affections, in which swelling of the mucous membranes leads to a narrowing of the lumen, the obstruction to respiration was of necessity increased. The impact of the cough and the spasmodic respirations were again followed by disturbances of the circulation, which led to thrombosis of the pulmonary artery, causing death.

ON THE EFFECT AND THE THERAPEUTIC USES OF ALCOHOL IN CHILDHOOD.

C. Baron (*Der ærztyl. Practiker 1897, No. 14 and 15*) relates first the harm occurring to children from the administration of alcoholic beverages in health, passing them to its medicinal value when exhibited in disease, and asserts that only very few indications for its administration can be found. The most important indications being the affections of the respiratory apparatus, bronchitis, pneumonia, edema of the lungs, diphtheria—which diseases are accompanied by high fever or by a great demand on the functions of the heart and lungs, when the various properties of the alcohol combine in producing its well-known favorable effects; for here we not only make use of its stimulating qualities on the cardiac function, its influence in increasing the number and depth of the respiratory act, and the lowering of blood pressure, but also of its power to reduce the temperature and to economize albumin. In erysipelas, surgical fever, great loss of blood, etc., alcohol is frequently indicated. The number of cases in which the undesirable effects of alcohol predominate, are, however, much more numerous. Above all, do diseases of the brain and of the nervous system fall into this category, beginning with simple forms of nervousness, and passing through the more severe forms of epilepsy, chorea, etc. In like manner is alcohol contraindicated in heart disease, nephritis, cystitis, enuresis, in rheumatic and similar affections, in diseases of the liver, of the gastro-intestinal tract, and in all chronic conditions.

Baron does not support the view of Grosz, who looks upon chronic disturbance of the nutrition as an indication for the use of alcohol. In these cases also, we had better avoid the use of alcohol, especially as these anemic, scrophulous, rhachitic children, are frequently extraordinarily sensitive to even small doses of alcohol. Baron has observed that after the administration of a saccharine solution of iron and manganese, in a number of children, cephalalgia, insomnia, etc., due to the cognac contained in it for its preservation, while other preparations of iron which did not contain any alcohol could be administered with impunity. We are well able to do without alcoholic beverages in chronic diseases, and are well supplied with plenty of valuable reconstructives in the various milk preparations, whey, eggs, malt preparations, iron, quinine, while stimulants, beef-tea, bouillon, coffee; in gastric affections, Russian tea, in addition to those in our pharmacopœia are plentifully to be found as substitutes.

In those cases, however, in which alcohol is indicated, we may usually rely on the heavy wines (Tokay, port-wine, madeira, sherry, marsala); cognac and rum will only be necessary in patients who have been previously addicted to beer and wine. The dose should be regulated, according to Ewald: Twenty drops for a three months' old child; fifty drops for one six months' old; one teaspoonful for nine months' old; one and a half teaspoonfuls for a twelve months' old; one children's spoonful for patients two to three years' old, three to four times daily. Children suffering with diphtheria are able to bear much higher doses.

ON INDICANURIA IN CHILDREN.

C. Cattaneo (*Policlinico, 1897, No. 4 and 6, Therap. Wochenschr, 1897, iv. 734*, has studied this question from clinical material, and has arrived at the following conclusions:

(1.) Pathologic indicanuria, may make its appearance in various diseases of childhood (not only in tuberculosis and affections of the digestive tract.)

(2.) In tuberculosis indican is present in the urine constantly (89.5 per cent.); in the greater number of cases (76.3 per cent.) indicanuria is pathological.

(3.) In disease of the digestive apparatus, indicanuria is also frequent, but is not constant in these cases, as there are some cases even in which not a trace of indican is present in the urine.

(4.) Although no diagnostic value can be attributed to the indicanuria in the tuberculosis of children, it may nevertheless be maintained that after excluding intestinal diseases, and suppurative processes, a permanent increase of indican in the urine may, in suspicious cases, be looked upon as pointing to tuberculosis.

CONTRIBUTION TO THE KNOWLEDGE OF DIABETES MELLITUS IN CHILDHOOD.

Dreyer (*Deutsche Med. Wochenschr, 1897, xxiii. 596*), has added the following cases to the rather sparse number of infantile diabetes:

On March 10, 1894, he was called to attend a child suffering from nocturnal enuresis. On examining the urine, Dreyer found a large quantity of sugar, but no albumin nor acetone; the following day he visited the child. The patient was a boy born on January 28, 1892, and was said to have had whooping cough during the summer of 1893, having always been well otherwise. The child had been weaned only eight weeks previous, and since then had been fed on goats milk, and ate with the family. For three weeks he drank a great deal of water, and was always asking for sugar, at the same time he began to wet his bed three or four times a night. He complained for a few days of being tired, did not walk, and was cross. He has also lost flesh recently. Ancestors on both sides were free from diabetes or nervous trouble.

Present state: The child is fairly well nourished. The skull has no tender points on pressure, nor other abnormalities; the fontanelles are closed. There is no fever nor cough, pulse rate 108. Respiration normal. Percussion sound slightly dull over the left clavicle; over both lungs there are whistling and squeaking râles. Cardiac dullness 1½ cm. to the right ef the clavicle; heart sounds, clear. Abdominal organs, normal.

Treatment: Regulation of diet (one or two eggs a day, 50 per cent. Aleuronat-bread with fresh butter, raw, somewhat fatty, ham or roast, milk, bouillon. Acid phosphor (2, 0 : 120.0) for thirst; saccharin. No change was observed during the following days, except that the appetite diminished and the child became weaker. On March 19, he refused to eat and was in a bad condition. On March 21 the pulse was small and could hardly be felt. Respiration, thirty to the minute, deep; the face had a tired expression, collapsed, the eyes were as a rule closed. Consciousness was not lost, vomiting had occurred. The urine contained albumin, diacetic acid and sugar.

Treatment: Sodium bi-carbonate with tincture of gentian; convulsions occurred at noon, but consciousness remained. Death occurred on March 22.

A CASE OF DIABETES MELLITUS IN A CHILD.

L. Rosenberg (*Wiener Klin. Wochenschr, 1897, x. 487*) presented this case before the Vienna Medical Club.

The child was two and a half years old, and was brought to Rosenberg about two months previously, with the report that the child drank a great deal during eight weeks, and had greatly emaciated. Examination of the urine showed quite a quantity of sugar. The patient is the first child, a girl. It nursed at the breast for seven months, but was given in addition some bread-pap, since it was two months old, and thrived well. After being weaned it was fed at first on milk and soup, later on mixed food, but received little farinaceous food, and no sweets. When eleven months of age the patient contracted measles, at one and a half years, varicella; on account of an existing rhachitis, it had been put on cod-liver oil and phosphorus for six weeks. The parents are healthy, no diabetes has occurred in their families.

Examination revealed a congenital laxation of the hip-joint, slight symptoms of rhachitis, extreme emaciation, a dry tongue, a strong aromatic fruity odor from the mouth, a dry, somewhat shriveled skin, increased respiration; the color of the urine was a light yellow, daily quantity, two litres sp. gr. 1,029, 52 per cent. of sugar present, diacetic acid, no albumin.

Diabetic diet was ordered as far as could be in a child, saccharin employed in place of sugar, and Karlsbad Mühlbrunn—three tablespoonsful daily, in the morning—was administered. Three weeks later the daily quantity of urine was reduced to one and three-fourths liter, the amount of sugar to 4.4 per cent. Diacetic acid was still present in large quantities. During the time of treatment, the patient was attacked by furuncles and abscesses on the head and fingers, and twice had an attack of febrile bronchitis. At present the abdomen is strikingly distended and painful, particularly in its upper half; a peculiar increased deep respiration and an unusually obstinate constipation are present.

Diabetes millitus is a rare disease at this age, Külz has only found six cases under two and a half years of age, in 110 cases collected. Prognosis is unfavorable; the younger the child, the more rapid is the course of the disease. In the present case the powerful acetone odor, the extreme emaciation, and above all the dyspneic respiration point to a speedy termination.

PEDIATRICS

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ORIGINAL ARTICLES

PRELIMINARY OBSERVATIONS ON THE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP BY THE LORENZ METHOD OF FORCIBLE CORRECTION, WITH THE REPORT OF A SUCCESSFUL CASE.

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(*Concluded.*)

THE Lorenz treatment is based upon the theory, that if parts about the joint may be sufficiently stretched to allow the head of the bone to be brought into direct contact with the rudimentary acetabulum, and if it can be held in this position, the weight of the body, in walking, constantly forcing the bone against the substance that partly fills it, will gradually enlarge it to its normal capacity; thus it is called the "functional weighting" method, and this is its

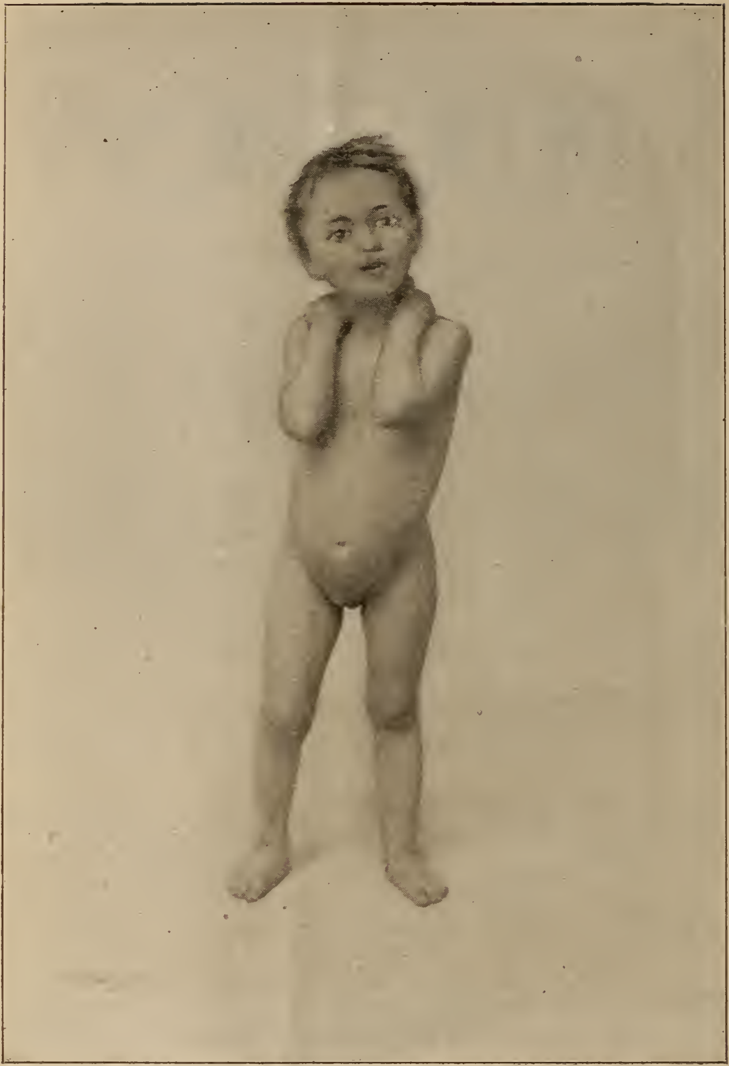

FIG. 7.

Photograph (February, 1896) of an older patient, age 3½ years, illustrating more pronounced deformity. Shortening at the time of operation (May, 1897) 1¼ inches. Complete correction of deformity and apparent cure.

Still wearing braces (April, 1898).

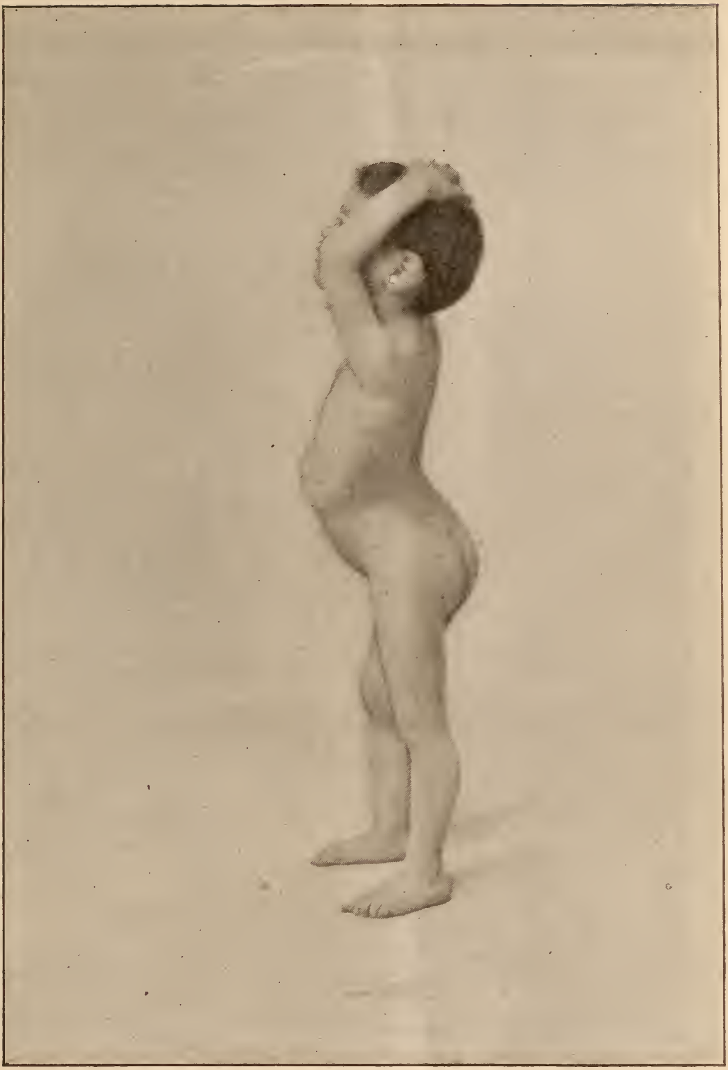

FIG. 8.

Side view of the same patient before operation, showing the lordosis and the twist of the pelvis, downward and forward, on the affected side.

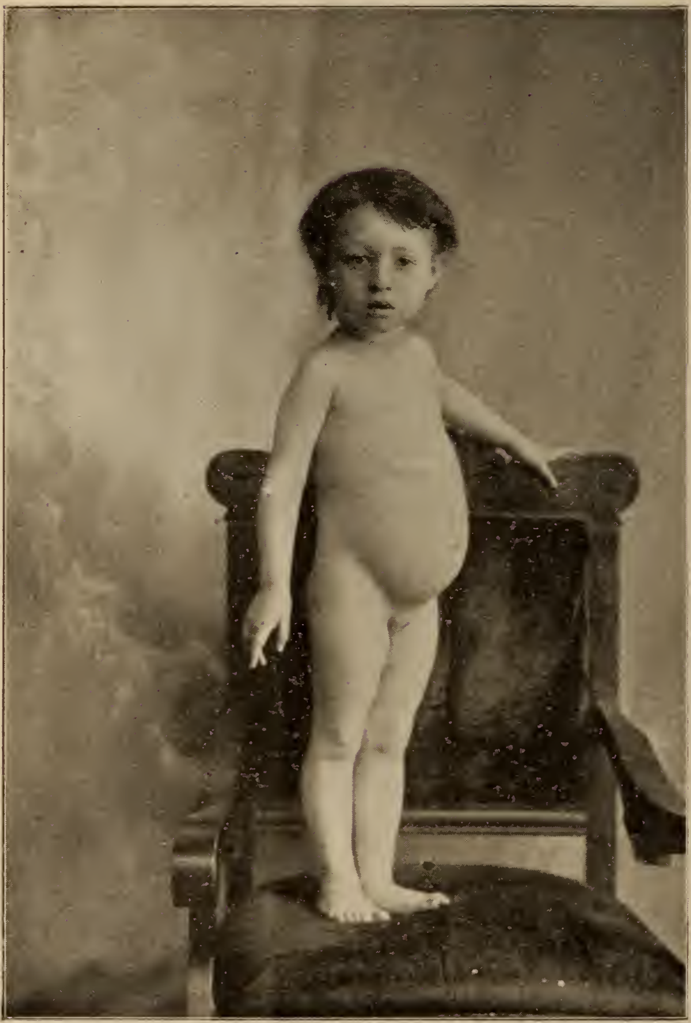

FIG. 9.

Congenital *Anterior* dislocation of the right hip, age 3 years. In this form, the distortion the body is much less marked.

Operation, February, 1897. Still wearing the plaster bandage.

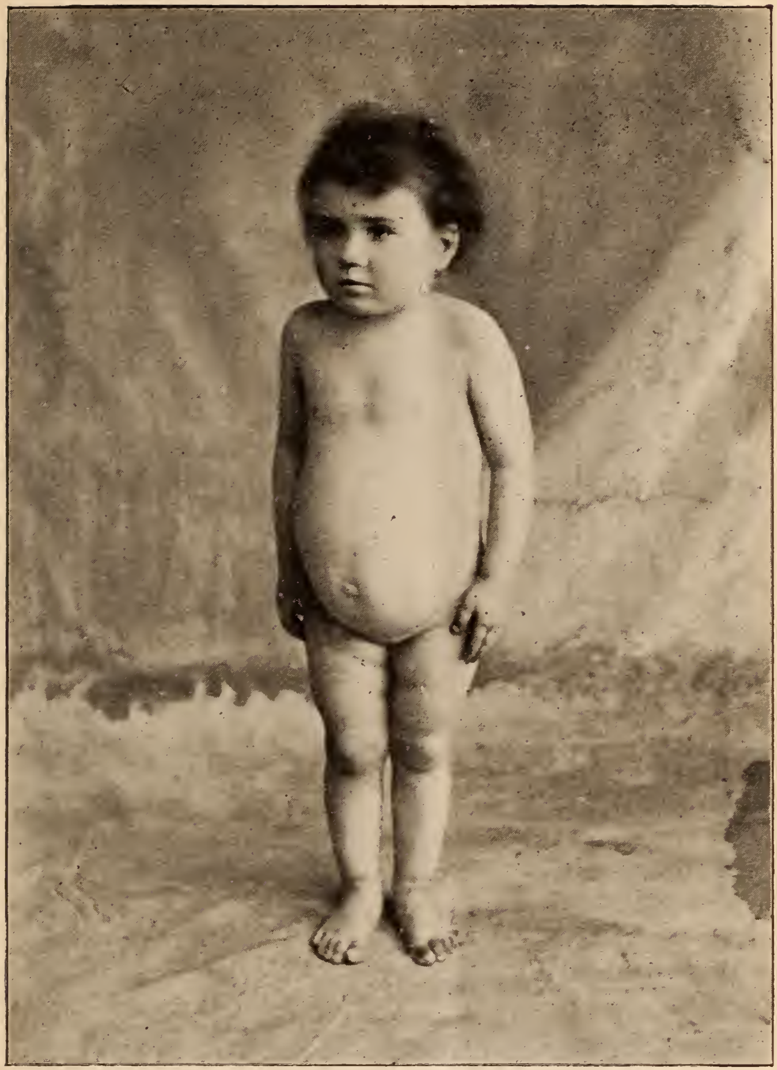

FIG. 10.

Congenital Anterior dislocation of the left hip, age 3½ years.

Operation, December, 1897. Still wearing the plaster bandage.

essential and vital distinction from the forcible correction of Paci, with which it is often confounded.

The steps of the operation are: First, Elongation of the limb. The trochanter must be brought down to the level of Nélaton's line, or lower. This may be accomplished by preliminary traction with heavy weights, or by manual force at the time of operation; the latter means being efficient in ordinary cases. The child having been anæsthetized, a folded sheet is passed between the legs and the two ends are held above the shoulder of the side to be operated uoon, or the assistant may clasp his hands about the perineum and thus fix the pelvis. One then seizes the thigh and begins a series of alternate stretchings and relaxations, using gradually increasing force, for from ten to twenty minutes, or until the resistance of the tissues is entirely overcome. The leg is then as long or longer than its fellow and lies limp in an attitude of abduction. For this preliminary extension Lorenz uses a powerful machine attached to the leg by means of a band about the ankle, but I am inclined to think that the manual method is to be preferred if one does not object to the labor that it involves.

Second, Reposition. One now attempts to force the head of the femur over the ridge that represents the posterior margin of the acetabulum, and through the opening in the contracted capsule.

The thigh is flexed to about ninety degrees, in order to relax the capsule; it is then gradually and forcibly abducted under traction, to a right angle with the body, or slightly beyond even, so that the head and neck of the bone may lie in the same plane with the side of the pelvis; the thigh is then rotated slightly inward so that the head of the bone may point toward the opening in the capsule, and while traction is continued with one hand the other is pressed downward above the head of the displaced bone, and it is then lifted and drawn over the obstacle formed by the rim of the acetabulum. If this is successfully accomplished, one hears and feels a distinct sound and shock, and the leg remains fixed in an attitude of flexion and abduction. From this semi-replacement the bone is at once displaced when the leg is adducted or extended.

Third. Acetabulum formation. One now attempts to enlarge the opening into the acetabular part of the capsule. While the head of the bone is forced against or through the

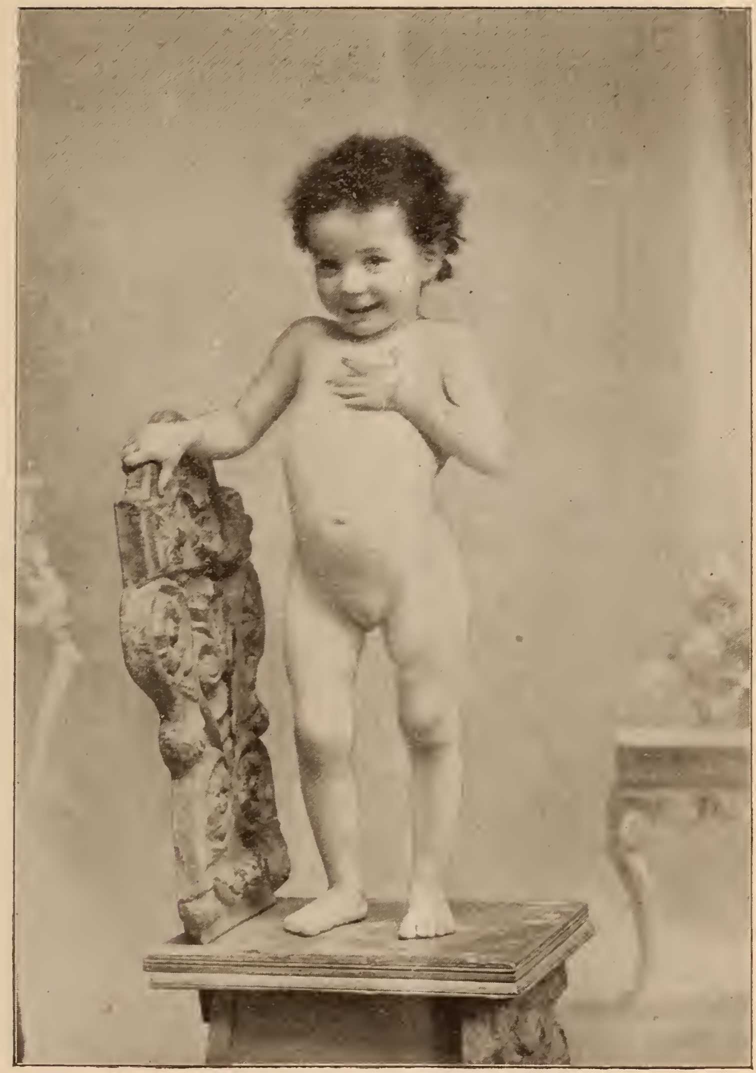

FIG. 11.

Congenital dislocation of both hips, age 3½ years, illustrating the separation of the thighs, the abnormal breadth of the pelvic region, and the prominent trochanters.

Operation on the right hip, January, 1898. Still wearing the plaster bandage.

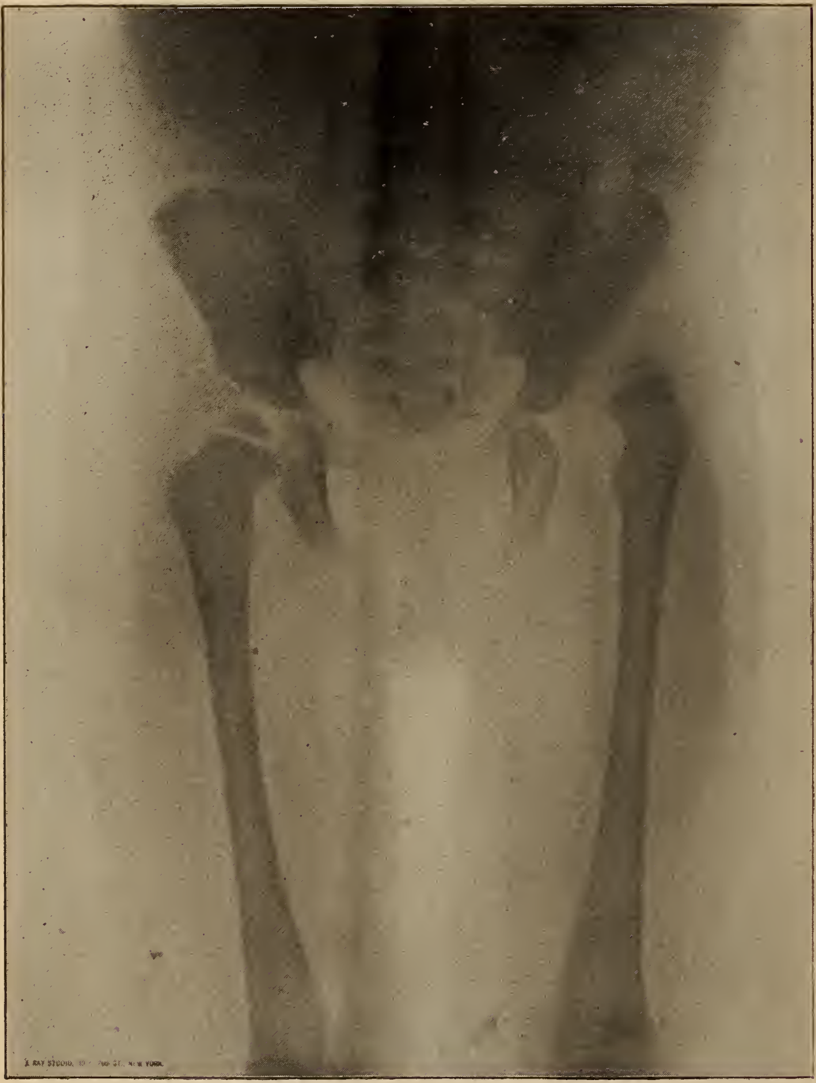

FIG. 12.

Skiagram of congenital dislocation of the right hip age 3½ years. Shows the elevation and displacement of the femur and the secondary depression on the pelvis, formed by the head of the bone.

After two unsuccessful attempts by the forcible method, the open operation was performed in July, 1897. The patient is cured, but is still wearing a protective brace.

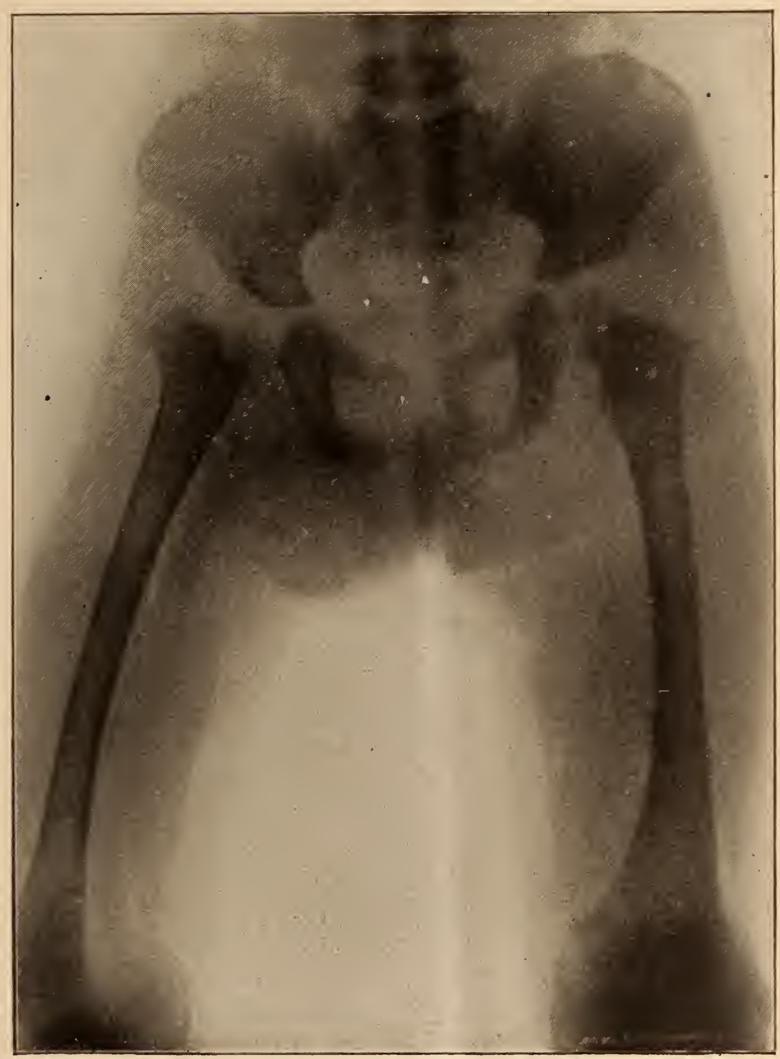

FIG. 13.

Skiagram of congenital dislocation of the left hip (from behind). Shows the effect of an unsuccessful operation, in which the dislocation has been transformed from a posterior into an anterior displacement.

opening, the thigh is forcibly rotated outward again and again, and extended to its full limit, in order that the anterior wall of the capsule, which is drawn tightly across the depression, may be distended and the capacity of the new articulation increased. When the manipulation is completed, the leg is fixed in the attitude of extreme abduction and extension by a firm spica plaster bandage extending to the knee.

At the time of operation one is able to make a fair prediction as to its outcome from the character of the reposition and its stability. In some instances the head of the bone seems to be actually replaced in a sufficient cavity, in others it appears to slip from side to side with but little indication of fixation.

The operation is free from danger, and the pain and discomfort are much less than one would expect after the force that has been employed. Occasionally there is some discoloration about the adductor region but this is practically the only noticeable evidence of the manipulation.

As soon as possible, the child is encouraged to stand and to walk, the awkwardness caused by the extreme abduction being somewhat lessened by a cork sole, about one inch in thickness on the other shoe. The original position is maintained for two or three months, when it may be gradully reduced as the stability of the joint increases. When the first bandage is changed, one examines the relation of the parts; if the reposition has been successful the head of the bone may be felt beneath the anterior inferior spinous process, but oftentimes it will be found pointing directly forward, showing that the operation has simply changed a posterior into an anterior displacement. (Fig. 13.) In such cases it is well to repeat the operation immediately and to rotate the leg inward until the head of the bone is forced into its proper position. In order to hold it in this attitude the plaster bandage must include the foot, which is often turned directly inward. Even at the primary operation, if there is a strong tendency to outward rotation, the spica may be applied in this manner to advantage, and in all cases I now prolong the first bandage below the knee, in order to hold the leg slightly rotated inward and for the better fixation of the joint. The body part of the spica is made like the ordinary plaster jacket; this has an advantage over the ordinary form, in that it supports the trunk and overcomes the habitual lordosis. In very favorable cases, like the one reported, the plaster may be finally removed in six months, but in most instances the treatment must be continued for a year or more, and when the spica is removed it is well to apply a simple jointed brace attached to the shoe and to a pelvic band, so that slight pressure may be exerted over the trochanter, and that the foot may be held slightly inverted. If the operation proves to be inefficient, it must be supplemented by the open method. This will be necessary in a considerable proportion of cases, particularly in older subjects, but the second operation will be much simpler and more easily performed because the preliminary treatment will have improved the relation of the parts.

The great advantage of this treatment is that it can be applied as soon as the diagnosis is made, for being free from danger and not necessitating a cutting operation or confinement to a hospital, the consent of parents is readily obtained; this is certainly not true of the older method. There is also another advantage, in that the muscles become accommodated to the changed relations of the parts while the leg is fixed by the plaster bandage, so that the long continued supervision and gymnastic training, that are essential after the open operation may be dispensed with. Even if the operation has merely resulted in changing a posterior into an anterior displacement it may be classed as a half cure, since the deformity of the spine is checked and the shortening of the leg is much reduced,

The modern treatment of congenital dislocation of the hip is one of the greatest advances in orthopædic surgery, since this disability, which was until very recent years considered a hopeless deformity, is now placed in the list of curable affections.

REMARKS UPON RETRO-PHARYNGEAL ABSCESS.

By F. Huber, M.D.,

New York.

ABIE A., four and a half months old, a pale rachitic child, had been ill for a week or more. A glandular abscess, at the angle of the jaw, on the left side, had been opened and drained by the attending physician without affording relief.

Examination at my first visit revealed a retracted and rigid condition of head—mouth open, expression anxious, with considerable dyspnea, and a nasal twang to the voice. Questioning the mother more fully, the following was elicited: There was considerable difficulty in swallowing; the child would take the breast, attempt to nurse, and then give up with an impatient cry.

All the symptoms pointed to some obstruction in the pharynx, probably a retro-pharyngeal abscess. Inspection revealed a bulging on the left side of the pharynx, and digital palpation established the existence of fluctuation, thereby confirming the presence of a lateral pharyngeal abscess.

Unaware of the character of the case, I had failed to bring any instruments with me. In the emergency, a pair of ordinary small scissors was sterilized, and introduced along the finger as a guide. Without any trouble the abscess was reached; the scissors opened, allowing several drachms of pus to escape. Warm lime-water was then ordered to be instilled into the nares every two hours, and small doses of chloride of iron were given internally. In a few days the child was discharged cured.

A number of instruments, more or less ingenious and complicated, have been devised to provide a safe means to open retro-pharyngeal abscesses. With quite a large experience in this class of cases, I have found a pair of dressing forceps a safe and efficient instrument to employ in opening the acute abscesses in the pharynx. The instrument is introduced along the index finger of the left hand as a guide, forced into the abscess, then slowly opened and withdrawn, the head of the patient being inclined forward at the same time by an assistant, to facilitate the escape of pus and prevent its entrance into the larynx. The jagged wound left does not bleed very much, nor is there a tendency to rapid closure of the opening. In these respects the forceps are preferable to the knife.

If the abscess be very large and tense, it is advisable to introduce a grooved director, allowing some pus to escape slowly and thereby relieve the tension, and avoid the danger of any getting into the larynx. The forceps are then employed in the manner referred to above.

In an emergency, the ingenuity of the physician will find some means at hand in the absence of a proper instrument. In one instance I made use of a large bodkin; in another, multiple punctures with a sterilized hatpin afforded efficient means of relief.

If the infection producing a retro-pharyngeal abscess arises in the pharyngeal mucous membrane, the process usually runs its course without involving the superficial cervical glands. In quite a proportion of cases of cervical adenitis at the angle of the jaw, suppuration of the deeper lymphatics occurs; and we may have as a complication a lateral pharyngeal abscess. In a few cases I have seen the process take place on both sides. Such cases are apt to be overlooked, the difficulty in swallowing and breathing being attributed to the swelling attending the suppurative inflammation in the superficial glands.

209 East Seventeenth Street.

INTUBATION TUBE RETAINED IN THE LARYNX FOR THIRTY-EIGHT DAYS.

By Frank W. Wright, M.D.,
Health Officer,

New Haven, Conn.

INTUBATIONISTS of large experience have occasionally reported cases of retained tubes, but as only one case has come under my care out of over fifty intubations, mostly for diphtheritic laryngitis, in which it has been necessary for the tube to remain in the larynx over six days,—this has been unusually interesting and instructive to me, and the cause of no small amount of anxiety.

R. C., age two years and ten months, was recovering from measles without having been under the care of a physician, when I was asked to see him on account of the difficulty he occasionally had in breathing. He was under my observation for seven days, and almost daily had paroxysms of dyspnea so great that it seemed as if the larynx should be intubated at once. These paroxysms would then be followed by partial, but never complete relief. The obstruction seemed to be slowly but surely increasing. The voice was fairly distinct; there was a croupy cough; no rise of temperature, and no exudate was to be seen upon the fauces, nor did repeated bacteriological examinations show the presence of the Klebs-Loeffler bacilli. I am certain there was no diphtheritic infection.

At this time the dyspnea became so great that I deemed it wise to wait no longer, and intubated. The little fellow did well, and upon the fifth day I removed the tube. Almost immediately the difficulty in breathing returned, and although I prepared and inserted another tube in great haste, before this could be accomplished the child had become cyanotic and unconscious, but immediately revived upon being reintubated. The tube was out of the larynx less than five minutes.

On the seventh day the tube was again removed, but this time I had another tube ready should the stenosis still be present. The tube was scarcely out of the larynx before the patient began laboring for air, and the obstruction seemed complete; but being prepared, I did not allow the child's condition to become so alarming as at the first trial. This time the larynx was free from the tube about three minutes.

For twenty-five days the tube was removed about twice a week, with the result each time that it was necessary to replace it within a few minutes, except on the eleventh day, when the child was able to breathe without it for eight hours, but with great difficulty.

The child took large quantities of milk, and his general condition was daily improving until the fourteenth day, when he had a convulsion, followed by a moderately severe attack of broncho-pneumonia.

The question in my mind was whether the obstruction was due to sub-glottic edema or granulations about the chink of the glottis. It was impossible to examine the larynx by the aid of the laryngoscope. This was attempted by my friend, Dr. Henry L. Swain, whose reputation as a laryngologist is national; but no satisfactory view of the larynx was possible, as the mucous secretions would cloud the mirror as soon as the tongue was depressed. To overcome either or both of these conditions, I had a tube made by George Ermold, the instrument maker, combining the points recommended by the late Dr. Joseph O'Dwyer, for retained tube when due to sub-glottic edema, and Dr. Dillon Brown, when due to granulations.

Dr. O'Dwyer, in a paper read before the American Pediatric Association, May 6, 1897, stated that probably almost all cases of retained tube were due to the tube being too large for the individual larynx, thus causing an undue amount of lateral pressure. This pressure being suddenly removed the sub-mucous tissue becomes infiltrated, and being surrounded by cartilage, can swell only in one way, thus obstructing respiration by narrowing the lumen of the larynx. This being the case, the dyspnea in the early stages usually returns slowly.

In my case I was in doubt as to the obstruction being due to the infiltration of the sub-mucous tissue, as the dyspnea returned immediately and the stenosis was practically complete, as it would be when due to granulations about the chink of the glottis. The tube I had made for this case was of the 2-size, with the retaining swell and head of the ¾-size, but the head was built up so that if the obstruction was due to granulation this might assist in their destruction by pressure upon them.

This tube was introduced into the larynx of my patient upon the twenty-fifth day, and was removed every fourth day for cleaning. The interval between its removal and the necessity for its return increased each time, so that upon the thirty-eighth day from the first intubation of the little patient, he was able to do without it entirely.

The result seems to indicate that sub-glottic edema, caused by the tube being larger than was necessary for this particular larynx, was the reason of the continued stenosis. According to Dr. O'Dwyer, the great majority of the retained intubation tubes occur in children in which the ¾-size tubes are used. In this case I judged the size to be proper both from the scale for ages and as the child was large for his age. If the trouble had been due to granulations, it seems as if I would have been able to detect them by the touch. It is not probable that they would have disappeared in so short a time. From my experience in intubation of the larynx, I can conceive of no other causes worthy of consideration that would have been likely to have presented these symptoms except sub-glottic edema and granulations around the chink of the glottis, and this latter only from the fact that the stenosis returned immediately upon the removal of the tube.

413 Orange Street.

EDITORIAL COMMENTS

Dentition

The views in regard to the effects of teething on the health of children have undergone a complete change. The doctors of the old school were accustomed to lay at the door of dentition most of the diseases occurring between the ages of six months and two years. At the present time many practitioners go to the other extreme, and deny that teething causes any symptoms whatever. Probably the truth lies in the happy medium, for while the importance of dentition in causing disease has doubtless in the past been greatly overestimated, yet it is true that reflex symptoms, due to teething, may arise, often of a serious nature. In *L'Independence Medicale* of January 26, M. G. Ausset gives expression to some pertinent remarks on the matter. He says: "The accidents due to dentition are both local and general. . . . A dry, nervous, and sometimes croupy cough often accompanies dentition, and in the sickly and rachitic there may be spasms of the glottis and laryngismus stridulous. In some infants the appearance of each tooth is accompanied by a bronchial catarrh. None of these symptoms due to dentition have any special characteristic serving to distinguish them from symptoms otherwise caused, so that the diagnosis is often difficult. A few rules will, however, be of assistance. The first thing to be done is to ascertain the previous health of the child, for nine times out of ten if a healthy child, hygienically brought up, is suddenly affected by any of the above mentioned accidents, we may affirm they are due to dentition. Reflexes, due to dentition, begin abruptly and disappear as suddenly as they came. They are not in themselves true diseases, but they may predispose to real affections. Dentition cannot create tuberculous meningitis, but in the case of a child predisposed by heredity and by previous localizations of tuberculosis, the congestion of the meninges, induced by dentition, might create a "locus minoris resistentiæ" wherein the bacilli of tuberculosis would find a suitable environment for its development. It may here be said that the custom prevailing with many practitioners of lancing the gums on the slightest provocation is one that in the majority of instances does more harm than good. There are occasions when lancing is necessary and affords great relief, but its indiscriminate practice is to be greatly deprecated.

The Psychology of Tickling, Laughing, and the Comic

Stanley Hall and Allin contribute an article with the above somewhat curious title in a recent number of the *American Journal of Psychology.* The subject of tickling, laughter, and the comic is entered into thoroughly, and provides some very interesting reading, especially in regard to its effects on children. It appears that tickling, when applied with discretion, is beneficial to children, as it induces laughter, which is now generally believed to be a healthy form of exercise for the young, although some authorities are still sceptical on that point. Vasey, for instance, contends that laughing is unnatural, and that man is not originally a laughing animal, that laughter is not universal among primitive people, and that many ancient races regard it as undignified. The authors of the article in question speak on the matter as follows: "Should not only tickling and every appeal to the risibilities of children be banished; and, indeed, does a sad mood uphold a wider mental horizon than a joyous one? How far can we or should we try to repress all unpleasant expressions and noises in children, and how far would our efforts to do so be likely to result in affectation worse than the disease? It is noticeable that if we conceive laughter as one of Hughlings Jackson's "unmistakable epilepsies," it is in the majority of adults—one of those which begins with the highest level of consciousness and with the finer muscles, and passes downwards to lower levels and more fundamental and earlier developed musculature, although sometimes in children this order is exactly inverted. Certain it seems that hearty laughing is a good thing for children, and might be listed among their inalienable rights. Mad, wild, weird and almost barbaric though laughter sometimes seems, perhaps reversionary and dissolutic in its nature, often convulsive in its intensity, on the whole, like occasional crying for babies, it is good for the voice, lungs, diaphragm and digestion, produces needed increase of blood pressure to irrigate new forming tissue, develops arterial tonicity, tends to range, flexibility, and vigor of emotional life, gives an optimistic trend against its evils, and tones down into settled and less paroxysmal states and grades of pleasure as maturity advances." Hecker affirms that a laugh is a consequence advantageous to the organism. He holds that in tickling and also in laughing at a joke, the physiological accompaniment is an intermittent pressure upon the brain through an intermittent contraction of the minute blood vessels therein, laughter realising this by causing their congestion. Hecker supposes that in tickling there is a stimulus upon the vaso-motor nerves, causing an anemia of the brain. In a recent issue of PEDIATRICS we discoursed on the healthfulness of occasional crying, but we should strongly recommend that, when possible, laughing should be induced in its stead, its effects are probably more beneficial, and the noise is decidedly more agreeable. However, we would also advise that in these, as in all other exercises, a wise discretion should be observed; moderation is good but excess is bad.

Hours of Work of Women and Children

In this country the hours of work of women and children vary considerably in different States and in different trades. In Utah the eight-hour day is in force for men, women, and children. In Massachusetts the working hours of women and children are limited by law to fifty-eight hours weekly. In this State and Pennsylvania women and minors under eighteen years of age are not allowed to labor for more than ten hours per day or sixty hours per week. In Illinois a statute was passed in 1893 prohibiting the employment of females and children for longer than eight hours in the day or forty-eight hours in the week. This, however, was set aside by the supreme court. In that State at the present time there is no prohibition of night work for children, and consequently young boys in the nail mills and glass manufactories still labor from six in the evening to three in the morning. Again, in the laundries young girls are often working the whole night, and from the effects of the long hours, together with the extreme heat, are constantly contracting rheumatism, and breaking down from nervous prostration. It is also allowable in Illinois to have girls of fourteen working in the large department stores so late that they are unable to reach home before midnight. This is in the case of those children who commence their day after noon and do not work longer than ten hours in any twenty-four. In some branches of industry women are employed all night, and in the sewing trades women and girls, owing to acute competition, are compelled to slave in much the same sort of way as when the "Song of the Shirt" was written. In fact, in those factories and shops in which the use of mechanical motive power has not been introduced, the hours of labor are practically unlimited. There can be no doubt but that many forms of labor are distinctly injurious to girls, and seriously prejudice their chances of becoming healthy mothers. At a recent meeting of the Berlin Society of Public Health, Dr. Strassman read a paper in which he stated that many diseases of the sexual organs were due to over exertion in the use of the sewing machine. The most unpleasant feature of the existing state of affairs is that there seems to be no hope of bettering the condition of women and children so far as shortening their hours of work is concerned. Women and girls are in a worse position than men and boys, having no organization and being for the most part unskilled workers. Their lot does not appear likely to be ameliorated by legislation.

SOCIETY REPORTS

PHILADELPHIA PEDIATRIC SOCIETY.

March 8, 1898.

The President, Frederick A. Packard, in the chair.

Amputation in an Infant Four Weeks Old, for Gangrene of the Leg.—Dr. R. G. Le Conte presented a patient illustrating this subject.

The infant was born at full term from healthy parents. Five days after birth symptoms of gastro-intestinal disturbance appeared. On the tenth day onychia of the fingers with yellow crusts formed. The cord separated on the twelfth day leaving a broad red circle of inflammation on the abdominal wall. On the fourteenth day both legs from the hip down became blue. By the twenty-first day the cyanosis of the right leg was clearing up, while the left leg became darker and swollen. Five days later small blebs appeared on the left leg with a very fetid odor. In the right leg the cyanosis had disappeared except for a small spot on the buttock. On the thirty-second day a line of demarcation had formed over the scar of the left tibia with separation of the tissues. Amputation was performed at the middle of the thigh, the femoral ligated, no other vessels bleeding. There was no shock after operation, and the recovery was uneventful.

DISCUSSION.

Dr. Packard.—Did the manifestations of vaso-motor trouble—the sloughing in the right buttock, and areas of cyanosis—disappear entirely?

Dr. R. G. Le Conte.—Yes it healed very promptly. There have been no other manifestations that I know of.

Dilatation of the Colon, also **Absence of the Abdominal Muscles.**—Dr. William Osler read papers upon these subjects. The notes are somewhat imperfect, but as sent me they state there was a constriction at lower part of the sigmoid flexure, and just above it there a concretion; there is no mention of the size of the concretion. The possibility is that the concretion came later. Two of my cases are really of interest in reference to the statement made by Mr. Treves, that all of the congenital and early cases are associated with narrowing of the gut. In the boy operated on, who recovered, Dr. Halstead made a very careful inspection of the entire gut and I know there was no constriction at the lower portion of the colon or rectum. In that case, on the operating table the ascending colon measured eighteen inches in circumference, and an enormous amount of feces escaped when the opening was made. I feel sure that there was in this instance no firm constriction, narrowing the gut as in the case reported by Mr. Treves, and as in my second case. The fourth case, the boy admitted in 1892 is really of great interest in connection with the possibility of recovery of certain of these cases. I think his case came, as some of the cases in children do, from obstinate constipation. He had an enormously distended abdomen. It all disappeared and when he came in a second time with enormous enlargment of the abdomen, I remember our astonishment in finding it was liquid and not gas. We drew off the fluid and six or seven months later at the autopsy the peritoneum was found thickened, there was no tuberculosis and the colon was not distended, but was thickened and there were some changes in the mucous surface. Its size was altogether different from that when first in the hospital. I think that is a hopeful case for prognosis in certain of the instances which in all probability follow constipation. In such cases as that which Mr. Treves reports, and the five or six cases which Dr. Martin puts in his first group, in which the symptoms date from birth. I think in all probability the earlier the surgeon is called in the better and the very satisfactory result following Mr. Treves' operation is exceedingly encouraging.

DISCUSSION.

Dr. J. P. Crozer Griffith.—I was struck in reading Treves' paper by the way in which he speaks of dilatation of the colon. He divides it into two classes. First, the dilatation beginning in adult life; and of this class he says that probably very few if any of the reported cases are idiopathic. Second, the dilatation which is probably congenital or at least begins very early, and of this he says that still fewer are idiopathic. According to this there would seem to be no such thing as idiopathic dilatation of the colon. I think probably the majority of cases reported are not idiopathic in the true sense of the term; yet there seems to be evidence that certain cases really do belong to this category. In these the only cause for the constipation, which is such a persistent symptom, is the fact that the colon is dilated and has been unable to expel the fecal matter, and no cause for this dilatation can be discovered, even post mortem. I came across a case of this nature a year ago, shortly after Martin published his interesting review in the *Montreal Medical Journal.* This case was entirely typical of the disease, and even at the autopsy no cause for this condition was found. I have seen also one other case which appears to be similar. Here are the photographs of the ten children.

Dr. J. Madison Taylor.—I speak with some diffidence of a case which came under my observation at the Children's Hospital some years ago, which puzzled us a good deal at the time and had points of similarity to those described. It subsequently came under the care of Dr. Fussell, of Manayunk, who tells me that it died about two years ago of an enterocolitis. There was no post mortem, but Dr. Fussell was of the opinion that the cause of death was atrophy of the intestinal walls, which gave rise to the extreme distention. This was a baby seventeen months old when I first saw it; nursed by the mother, a perfectly vigorous, healthy woman. The abdoman of the child had been noticed to be very much enlarged as far back as the mother could remember, and when I saw it, it was excessively tympanitic. The lower part was dull on percussion, and felt boggy, suggesting accumulated feces. This after a time was relieved in a great measure, although never completely, even after the bowels, from various devices, had been pretty thoroughly emptied. In the left hypochondriac region there was an enormous dilatation, distinctly gaseous. The patient lived in the extreme northern limits of the city and came to the Dispensary only at long intervals, which prevented our employing any very systematic or continuous measures. Attempts to wash out the bowels were met with great difficulty. A soft catheter could be introduced only a short way at first, after various attempts on our part while the child was in the Trendelenburg position. After many efforts it entered the bowel but never satisfactorily. Faradic electricity was repeatedly used to stimulate the intestinal walls, but with little success. The interesting feature was the fact that there was relatively little deterioration of health and fair evacuations of the bowels could be secured, occasionally spontaneously. We were able to satisfy ourselves that there was no abdominal tumor other than the fecal accumulation. I am satisfied that the condition was a congenital dilatation of the colon.

Dr. F. A. Packard.—In the first case there was a concretion in the intestine. I would like to ask Dr. Osler whether the concretion could have had any causative relation or whether it was simply the result of dilatation. In the fourth case the fatal termination seems to have been not due to dilatation of the colon at all, but entirely to the cardiac condition. While the diagnosis is as a rule unfavorable, in this case, barring the heart lesion, the boy might have lived a considerable time.

A Clinical Method for the Estimation of Breast-Milk Proteids.—Dr. George Woodward read a paper on this subject.

Two "milk burettes," each contained 5 c.c. of milk, are subjected to a temperature warm enough to rapidly sour the milk and allowed to remain in this warmth until a distinct precipitation can be seen. The burettes are then cooled in water, the milk serum withdrawn into two graduated tubes, 10 c.c. of Esbach solution added, the tube shaken, centrifugated until the reading is constant. This reading expresses in percentage the amount of total proteids in the milk.

The most satisfactory "milk burettes" have a glass pinch cock or valve and a narrow exit tube about 1 inch long. A temperature of 95° F. to 100° F. is the most rapidly effective to produce fermentation. This is conveniently obtained by placing the tubes in a burette stand and the stand in contact with a radiator or steam pipe leading to a radiator.

The time required to obtain a distinct precipitation of casein is from eighteen to 24 hours. The milk has them separated into an upper layer of viscid yellow fat and a lower layer of fluid milk along the sides of the tube and at the bottom is a granular precipitate.

The cooling of the milk increases the viscidity of the fat and facilitates its separation from the milk serum. The milk serum is received into 15 c.c. graduated tubes, the solution of picric and citric acid added up to the 15 c.c. mark, the mixture stirred with a glass rod and placed in a hand centrifuge.

The amount of centrifugation required is in direct proportion to the care used in separating the fat. If fermentation be watched and the separation made as soon as the casein precipitate is distinctly present, the centrifugation to a constant reading may be quickly accomplished.

Twelve analyses by centrifuge, each checked by the Kjeldahl method as adopted by the association of Official Agricultural Chemists, showed close correspondence of results. In one case the Kjeldahl result was .65 per cent. below that given by the centrifuge, in a second case 0.3 per cent. In all the other cases the difference was less than 0.25 per cent.

Dr. J. P. Crozer Griffith. I think only those who have been particularly interested in this question of the estimation of the percentages of the ingredients of milk realize what a particularly valuable contribution this is to our medical knowledge. It is the first step toward giving the ordinary practitioner some means of determining for himself how rich in proteid material the mother's milk may be. Heretofore, only those living in cities have had any means whatever of having examinations made and even then it was beyond the power of those where patients were not well to do, unless there was some one who had been as kind as Dr. Woodward in his offer to do this work without charge. Some months ago I talked to Dr. Woodward about this matter of a ready means for estimating the proteids and learned that he was working at it, so I have no doubt this is the result of long experimentation and thought, and I for one am very deeply grateful to him. He will, it is to be hoped, go on and apply this method to the estimation of the proteids in cow's milk. There seems no reason why the same procedure should not answer. If it does it seems that anyone of us will be able to tell with the centrifuge whether the cow's milk we receive is properly rich in proteid material, just as we can with regard to the fat.

Affections of the Conjunctiva and Cornea Observed in the Acute Infectious Diseases of Children.—Dr. Burton K. Chance read a paper on this subject, in which he stated that the catarrhal symptoms so frequently noted in the eyes during the course of the infectious diseases, are local manifestations of the general disease, and their presence may be of such prominence as to react upon the health of the child, and if such symptoms are not treated there may result permanent damage to the ocular structures interfering with the vision in after-life. The author described the special symptoms which occur in small pox, measles, scarlatina, pertussis, influenza, and typhoid fever, and laid stress upon the development and results of phlyctenular ophthalmia as commonly produced during the course of these diseases and prolonged during convalescence. He then urged that early and prompt treatment be instituted, there should be frequent cleansing of the conjunctival sac daily, using warm, bland solutions, and set forth the necessity of strict hygienic regulations, together with the maintenance of tonic and alterative treatment throughout the entire period of convalesence. In thus caring for the eyes he is of the opinion that the high percentage of impaired eye-sight resulting from opacities and distortions will be greatly reduced.

DISCUSSION.

Dr. Prendergast. I am particularly interested in these cases because I now have about sixty cases of measles at the St. John's Orphan Asylum. Asepsis of the conjunctiva is an impossibility. The nearest thing to this we can do is to flush the conjunctiva with a mild bi-chloride solution, 1 to 5000. Strong bi-chloride would injure the cornea and epithelium. Dr. Chance's idea of treatment in these cases is excellent. The yellow oxide of mercury about the lids and warm boracic acid wash are very grateful, but I would advise all to be extremely careful of bi-chloride of mercury. If used too strong it simply makes the soil more suitable for bacteria which spread to the layers of the cornea. Since the conjunctiva is exposed to the atmosphere and dust, wiped with unclean clothes and hands and washed in dirty water, is one of the best soils we have in the whole body for the cultivation of bacteria. Even the bacillus tuberculosis, the gonococcus, and the diphtheria bacillus have been present in many cases. The proper thing in these cases is to thoroughly flush with warm boracic solution, or my own belief is that normal salt solution or warm distilled water will do as much good as anything. The operators of the present day who are doing cataract operations simply clean the cul de sac as best as they possibly can. They open the eye with fear and trembling because they have a good soil for bacteria.

PRACTICAL NOTES

The Treatment of Typhoid Fever in Children.—FILATON (*Revue de thérap., No. 12, 1897*) says that hygienic and dietetic measures are of paramount importance: A cool temperature should be maintained in the room in Summer and Winter by keeping the windows open; in case of delirium, absolute rest about the patient; food should consist of only small quantities of milk or beef-tea in the beginning; during convalescence the greatest care should be exercised in satisfying the appetite; no mental excitement should be allowed for one or two months, etc. In the treatment of this disease, calomel administered early will have a favorable influence on the course of the disease without, however, influencing its duration. He orders it in doses of 0.06 (1 grain) every hour, and if no stool is obtained after four to six doses, a spoonful of castor oil is given. Baths are employed, only on account of their influence on the nervous system, twice daily. Antipyretics are administered by him only when absolutely necessary, and by preference in the form of phenacetin, in doses of one decigramme (1½ grains) for each year of life, divided into three portions. When diarrhea is present all acid drinks should be avoided, the milk to be given only in small quantities and diluted with lime-water. Excessive diarrhea is combated with a few drops of opium; great meteorism with valerian; and constipation by cool enemata. Stimulants are permitted weak patients; on the other hand the usual sedatives are applied to allay excitement in the patient. In somnolency, hot baths followed by cold ablutions are indicated. For the bronchitis, apomorphia is given. The treatment of intestinal hemorrhage is absolute quiet, perhaps ergotin or liquor ferri sesquechlorate. The appearance of intense anemia brought on by the disease may render necessary the subcutaneous injections of a normal salt solution of 50 to 100 grammes (1½ to 3 ozs.).

School Labor and Bodily Development.—PANLY (Lubeck) discussed the influence of school labor on health and bodily development at the International Medical Congress in

Moscow. According to the report in the *Deutch. Medic. Wochenschr.* he pointed out that the so-called school diseases were due not only to the school but to the home studies (piano-playing, sewing, knitting, painting). In many cases the occurrence of myopia and other disturbances could be traced to defects in the plan of study. We should condemn the slanting writing as taught at present, with an oblique position on the right of the copy-book. Myopia increases with the amount of work done (1 per cent. in the village school, 10 per cent. in the higher school, and 28 per cent. in the gymnasium). According to the investigations of Burgstein, an hour is too long at a time to give instruction to younger children. According to Stresbach and Friedrich, a recess of two hours for dinner is not sufficient time to allow the scholars to recuperate from their morning studies. Therefore recesses of sufficient length, athletics, or, during one or two free afternoons, gymnastic exercises of all kinds, for example, cycling, swimming, and skating, are absolutely necessary. Vacation should not be burdened with vacation exercises. Every school should be under the supervision of a physician. Besides this, it is most urgently recommended to have the teachers instructed in school hygiene.—*Der Kinderaszt., 1897, viii., 237.*

Death From Worms.—CONCETTI reports a case of severe fatal follicular enteritis in a child three years of age, due to the presence of over 100 ascarides and their eggs.—*Berichte-der Universit. Kinderklin, Rome.*

Salol in Angina.—C. DE LA CARRIERE administers salol internally in acute angina, on account of its ability to rapidly relieve pain and difficult deglutition, to prevent abscess formation, and, when given early, to materially shorten the duration of the disease. Daily dose for the first year of life 0.5 grammes (7¾ grains), from six to fifteen years of age, 3 grammes (46 grains), and later 4 grammes (1 dram). No bad results have been noticed.—*Jour. de Pract.*

Cause of Gastro-Enteritis.—According to CZERNY and KELLER, gastro-enteritis is due to an acid intoxication of the tissues (not in the intestine). The lowering of the alkalinity of the blood acts injuriously on vital organs, and leads especially to degeneration of the liver. One indication of this condition is an increase of ammonia in the urine. Further infection takes place from the intestinal tract.—*Jahrb f. Kinderheilk.*

Intubation.—Abarnon observed twenty-six cases of intubation for croup in a country practice, with a mortality of 31 per cent. He met with occlusion of the tube by membrane, and consequent coughing out of the tube in only one case. In accord with Bokai, he claims that the pushing of the membrane downward is a very rare accident in careful intubation, and also that other complications of a dangerous nature only occur in very few cases, so that the continual presence of the physician is by no means necessary.—*Thè de Paris.*

Lead Poisoning From Toys.—Abrahams reports the case of a child which, after being in perfect health up to the seventh year, began to sicken (emaciation, salivation, dry skin, coated tongue, fetid breath, colic, etc.) and to show pronounced symptoms of lead colic, the cause of which, as was afterwards determined, being toys made of lead, leaden soldiers, boats, dolls, etc.—*Medico-Surgical Bulletin.*

For Itching in Urticaria.—

℞	Menthol	5.0 (1⅓ dram)
	Chloroform	
	Ether	
	Spirits of Camph., āā	15.0 (4 drams)

M. Sig: For external use. After applying with a sponge or brush, powder parts with oxide of zinc or lycopodium.

Favorable Influence of the Diphtheria Antitoxin on Pneumonia.—Cantu, of Pavia, observed a case. The pneumonic infection was said to be rendered milder, and the crisis hastened; its effect on the temperature was noticed within the first twenty-four hours, the general condition was improved, and the patient became stronger. Cantu explains this effect by the favorable influence of the serum injection on the whole body by causing a leucocytosis, and the excretion of the pneumonia toxines. The diphtheria antitoxin was also said to have a favorable influence on beginning tuberculous processes.—*Aertzliche Rundschau.*

ABSTRACTS

ON SEPARATION OF THE LINEA ALBA, WITH SYMPTOMS OF INCARCERATION, IN CHILDREN.

K. Büdinger (*Wiener klin. Wocheschr, 1897, x. 491*) says that a separation of the muscles of the recti abdominis is met with at different ages and from different causes. In children we frequently find the recti abdominis separated more or less from each other, but, as a rule, this condition is rectified long before the age of puberty is attained, so that we may consider it rare in youth. Later, as is well known, we meet with it in multiparæ, after operations, after traumatisms, etc. The separations occurring in children have their seat in the superior portion of the abdominal wall, reaching from the xyphoid process to the navel or somewhat below it, in which case, however, it is by no means necessary that an umbilical hernia need exist, but the umbilical ring may be distinctly felt as a tendinous wall, and firmly closed. The separation takes on quadrangular shape, from the fact that the upper ends of the recti muscles are not in contact but are inserted into the arches of the ribs at a more or less greater distance from the median line. The gap, therefore, is bounded below by the muscles, above by the arches of the ribs, and the xyphoid process projects into it from the superior angle. This form of separation is congenital, and is caused by a partial, or rather belated closure of the deep layers of the abdominal wall.

As a rule only the traumatic separations occurring in the adult are looked upon as serious and demanding operative interference. Nevertheless this separation of the recti muscles may also give rise in children to serious disorders which, in the first place, may consist of symptoms of incarceration occurring in paroxysms, and further on may become the cause of deep-seated disturbance of the general health of the patient. When this is the case, we will find a characteristic, typical picture of the disease, which may be illustrated by the following history:

1. On December 13, 1896, a working woman brought to the clinic her son, six and a half years old.

The boy had enjoyed excellent health up to one and a half years ago, was well nourished, vivacious and lively. Then he became captious in his food, refusing especially to eat bread, rolls, potatoes and vegetables. He emaciated visibly, and became changed in his whole manner, becoming quiet, and only rarely participating in the frolics of his brothers and sisters. The attention of the mother was, however, particularly attracted to the fact that frequently the boy would suddenly stand still, especially after some quick movement during running or playing, bend the body forward, press his hands to the pit of the stomach, and become very pale. In a few seconds he would recover himself, but remained downcast, complaining of pain in the stomach for some time. During the last few months these attacks became more frequent, and the patient could only be induced to take liquid food, as the pain in the stomach would at once occur when he took solid food.

The greatly emaciated but otherwise well developed patient, whose internal organs were perfectly healthy, and whose abdomen was not tender to pressure, presented a separation of the recti muscles, reaching from the arch of the ribs to the umbilicus, above which they were united by a sharply defined tendinous strip, one-half a centimeter (.4 inch) broad. The umbilicus itself, on the other hand, was closed; two fingers could with ease be laid into the gap below the xyphoid process, which narrowed itself to one-half its breadth above, as it extended downward. When the patient slowly rose to a sitting posture, in which case the muscles are made tense, the contents of the belly protruded between the muscles, in the shape of the keel of a boat, but gave rise to no pain.

He applied a dressing of strips of American adhesive plaster, which, lapping over each other in the form of a roof-tiling, covered the whole anterior portion of the abdomen as far as the cleft extended. One week later the mother reports that within two to three days after the application of this dressing, all the patient's distress ceased. The boy began, without urging, to eat solid food, and the attacks from which he formerly had suffered returned no more. Owing to the appearance of an eczema, due to the adhesive plaster, a salicyl-soap plaster was substituted for it. Improvement remained permanent, the child rapidly gained weight, and is now well.

2. The second case came under observation on January 1, 1897. The son of a factory director, seven years old, suffered an attack of pneumonia in the autumn of 1895, from which he seemed to recover perfectly. Nevertheless, the patient began to emaciate a year ago, and showed a noticeable repugnance for solid food, which became more and more marked. Bread and vegetables he refused altogether, meat he took only in small quantities, although he had been a pretty good feeder before. When making a quick movement, particularly during violent play, he would suddenly complain of great pain in the region of the stomach, and would become very pale. He would then drop quickly into the nearest chair with retracted abdomen, and a strong, forward inclination of the trunk, and with both hands pressed over the region of the stomach. These attacks usually lasted only a few seconds; at times, however, the patient would complain of pain in the upper part of the abdomen for some hours, and move about with great exertion and bent body. A number of physicians had diagnosed the case as catarrh of the stomach, but were not able to produce any amelioration by internal medication.

The author found an extensive separation of the recti abdominis in the greatly emaciated patient. These muscles were separated about 3 cm. (1 inch) from each other at their insertions in the arch of the ribs, took their course somewhat obliquely toward the umblicus, where they still were separated about 2 cm. (¾ inch) from each other but were joined by a diagonal strip of tendinous structure, sharply defined above. The umblicus itself was closed. When the patient raised himself from the recumbent to the sitting posture, the contents of the abdomen bulged out between the muscles in the form of a ship's keel. The same dressing was applied as in the first case. Two days later the patient was able to eat two doughnuts for breakfast without any bad result; the appetite improved remarkably, and all variety of food was eaten. Relief was permanent.

The symptom-complex presented in these two cases seem to be altogether unknown, nor does separation of the recti abdominis in children seem to be recognized. Notwithstanding this, the writer claims that this anomaly occurs quite as frequently in young children as umbilical hernia. It is true that as a rule this condition does not give rise to any trouble, but it will be found that the reverse is not very rare, only it has not been recognized. Therefore the little patient is treated for catarrh of the stomach until spontaneous healing occurs, when the application of a simple bandage would have relieved the child in a few days. From the size of the cleft, he surmises that it may easily be possible for a portion of the stomach to be caught between the muscles. This may account for the repugnance of the children to solid food, as the patients instinctively shrink from producing a rapid and great distension of the stomach after they have once experienced that the attacks are thereby promoted.

But why do these symptoms only make their appearance so late, and not during the first years of life? In the cases described they were manifested at the age when the muscular system of the whole body, and therefore also that of the abdomen, began to develop, and we may find the answer in this as well as in the fact that at this time the children take to more lively amusements, thus giving ample opportunity, during violent play, running, etc., for stretching the recti muscles and causing the protrusion between them of the contents of the abdomen.

In a third case, a traumatism could be traced as the beginning of the affection. Most likely we have to deal with true symptoms of incarceration in all patients. In all cases the body was inclined forward either for a shorter or longer time, evidently to relax the muscles and press the contents of the abdomen back into position. The sudden pain and occurence of paleness hardly permit of any other explanation than that they were caused by the constriction of abdominal organs, as we cannot assume in these young and previously healthy individuals that they could be referred to traction from adhesions, as is so often the case in hernias of the linea alba in the adult. This, however, can only be said of the early stage, as adhesions later on are liable to form.

The writer lately observed a fourth case, in which the mother removed the adhesive plaster dressing after a time, when the symptoms at once returned with their former intensity, but on the re-application of the dressing, again disappeared.

A NEW THEORY OF CONGENITAL SYPHILITIC AFFECTIONS.

K. Hochsinger (*Wiener klin., Wochenschr., 1897, x. 564*) read a paper before the Vienna Medical Society on this subject. He maintained that hereditary syphilis was characterized in its early manifestations in the fetus and young infants by a tendency to diffuse infiltration, while the early forms of acquired syphilis and the later forms of hereditary syphilis presented the type of a circumscribed cell-proliferation. This is most clearly seen in the study of the visceral changes which early congenital syphilis produces in the fetus during intrauterine development. Here we rarely find isolated nodes, and these, if present, should not be accepted as unquestionably syphilitic, for the reason that no bacteriological examinations have as yet been made, and, therefore, a congenital tuberculosis might easily be mistaken for it. We have learned from recent investigations that an association between congenital tuberculosis and congenital syphilis is possible. Another peculiarity of congenital syphilis consists in analogous diffuse changes in the integument of the infant as we meet with them in the visceral organs of the fetus. These processes consist of a diffuse, superficial infiltration of the skin. The histological changes exhibit the same type in these diffuse skin affections as in the diffuse visceral affections. We find an inflammatory cell-proliferation, which arises from the adventitious and perivascular tissue of the smallest blood vessels. We find also in this diffuse syphilitic skin affection that the primary seat of the affection is confined to the sweat glands, the smallest arteries, veins, and capillaries of which are the seat of a most intense cell-proliferation. The exclusive occurrence of the inflammatory infection in the walls of the blood vessels, gives rise to the idea that the virus which by heredity has invaded the organism of the embryo and is circulating in its vessels, acts as a direct irritant to the walls of the vessels. The diffuse syphilitic inflammatory processes always attack the large intestinal glands of the fetus in the first instance. There is no syphilitic fetus and no syphilitic still-birth in which the liver is not the seat of a diffuse vascular and interstitial affection, and the kidneys, the lungs, and the pancreas are undoubtedly affected by the same disease in two-thirds of the cases. The skin, on the other hand, is not yet the seat of a specific affection in the greater number of syphilitic new-born, an exanthem, especially the diffuse affection of the soles of the feet and the volar surfaces of the hands, only occurs during extrauterine life.

From this we learn that the virus of hereditary syphilis must possess a particular affinity for the parenchyma of the glands, otherwise it would be impossible to explain the fact that syphilitic fetuses are attacked by a diffuse inflammation of the intestinal glands, while all other tissues of the organism, and more especially of the nerve, muscular, and bony tissues, and the sensory organs, seem to be free from such syphilitic affections during the early months of fetal life. An explanation of this fact, however, is to be found in the history of development.

The liver is the first organ of intrauterine life which is complete in its functions; it presents glandular epithelium in the second month of fetal life, and at this time it secretes bile. The epithelium of the kidneys and of the lungs is also formed in the third month of fetal life, somewhat later that of the pancreas and of the other subordinate organs. It is now perfectly clear that the lymph current and vacularization which is necessary for the nutrition of a glandular function, is in excess of the vascularization of the fetal tissues which attain development at a later time. The lung is constructed like an intestinal gland, the same as the liver and the kidney; it contains exclusively cylindrical epithelium to the end of the fifth month of fetal life, and is fashioned on the type of an acinous gland. The alveolar-system, with pavement epithelium, is developed gradually. The manifestations, therefore, of congenital syphilis in the visceral organs and at the epiphyses of the bones are explained in this manner: The syphilitic virus finds in the organs, which during fetal development are characterized by free blood and lymph supply, the most favorable soil for its action.

In the light of this developmental theory, it becomes clear why the skin becomes affected at a much later period of life. The skin begins to show the first evidence of gland formation only at the fifth month of fetal life. As long as no glandular tissue is formed in the skin, there is lack of free blood and lymph supply. This also explains the rare cases in which an exanthem, if found at birth, affects those portions of skin which are the seat of the most advanced development of the sudorific glands, i. e., the palms of the hands and the soles of the feet. These regions are the usual location of congenital syphilitic pemphigus and of diffuse syphilitic dermal-infiltration because they are supplied with the greatest number, the largest, and most closely crowded sweat glands.

In those organs in which the circulation is unequal, as in the long bones of the fetus, the syphilitic inflammation begins at the point of greatest blood supply and not in the neighboring parts. For this reason it is incorrect to consider the visceral affections of the fetus and infant as tertiary; they are in truth the first symptoms of congenital syphilis, and differ in no way from the changes which may be demonstrated in the diffuse inflammatory affections of the skin in the infant.

The history of development also explains the frequent death *in utero* of children of syphilitic progenitors.

THE BACTERIOLOGY OF ULCERATIVE STOMATITIS.

J. Bernheim (*Wiener klin. Wochenschr, 1897, x. 637*) studied thirty cases of ulcerative stomatitis during the last two years, and made a very interesting bacteriological discovery.

Ulcerative stomatitis is characterized by the appearance of small ulcers on the edge of the gums, accompanied by tumefaction and redness, which present a white, smeary, bad-smelling deposit. Occasionally the mucous membrane of the cheek presents similar ulcers. The localization of this process on the tonsils is not mentioned. If this localization is observed with disease of the anterior oral cavity, it is not difficult to recognize. Should the affection, however, make its appearance only on the tonsil, as pretty frequently happens, a mistake between it and diphtheria may readily be made. Hence it is of great importance to know that a bacteriological examination can, in ulcerative angina *exclude* diphtheria. He found in the deposit on a recent ulcer two characteristic microörganisms—a bacillus and a spirochæte. Both are mobile, and as they are always found together, seem to stand in a symbiotic relation to each other. Unfortunately, cultures cannot be obtained from them. These microörganisms are not unknown, and have been found by Miller, for example, in patients with carious teeth. He also found them in these cases, but only in small numbers, which were not in proportion to the large numbers found in the ulcers of stomatitis. Strepto and staphylococci, which are frequently claimed as the excitors of certain forms of anginas, as well as the bacillus of diphtheria, are also met with in the healthy oral cavity. They, however, are only found in small numbers, and are present in large numbers or in pure cultures only in the specific affection. The same may be said of these microörganisms when present in ulcerative stomatitis.

THERAPY OF THE DIPHTHERITIC AFFECTIONS OF THE ORGANS OF CIRCULATION.

SCHMALTZ (*Jahrb. f. Kinderheilkunde, 1897, xlv, 119*) said that the first condition for treatment depends on a minute observation of the patient, and this is especially difficult in this disease. The dangers to combat are not overcome even after the primary affection has run its course.

The patient should be observed for at least three weeks after apparent recovery. During this time, the general aspect of the patient, the condition of the heart and of the urine, should be carefully watched. If this cannot be done by the physician, we must explain to the friends the numerous symptoms which may indicate danger.

The best remedy in the treatment of heart-failure is, without a doubt, rest in bed. It is wise to keep all patients suffering from diphtheria, with the exception, possibly, of the very lightest forms, in bed for at least two weeks. Should they, during this time, show any suspicious symptoms, permission to leave the bed should be withheld. If cardiac disturbances, a frequent, irregular pulse, etc., occur, the recumbent position in bed must be insisted on. The administration of digitalis and other cardiac drugs have never produced an appreciable result in the experience of the author. He, on the other hand, believes that the influence of cold, in the form of an ice bag, applied over the region of the heart, has a sedative effect on the heart's action. When heart-failure makes its appearance the stronger stimulants, especially camphor, etc., should be employed. He makes it a rule to administer alcohol only in conditions of threatening collapse. The diet should be regulated from the beginning in every case of diphtheria, with regard to the fact that we are, in most cases, dealing with diseased kidneys, and perhaps with a diseased circulatory apparatus. The diet should, therefore, be as bland as possible, consisting of milk, eggs, carbo-hydrates, butter, and white, light meats, while strong beef-tea, the so-called peptones (albumoses) should be avoided.

The first few days after leaving the bed, the patient, after an attack of diphtheria, should, under all circumstances, be carefully watched, for we find that, even in cases in which convalescence has been uneventful at this time, some manifestation of disturbance in the circulatory apparatus which should cause us to return our patient to bed for a number of days. The experience that demonstrable heart-lesions are not infrequently left behind for a long time after an attack of diphtheria makes it imperative for the physician to continue his observations of the patient for an indefinite period. It is well known that the heart during childhood possesses extraordinary recuperative power, and that disturbances of this organ, even when they have lasted for years, may occasionally disappear. We are therefore justified in not losing hope too early.

It is difficult to say whether Behring's antitoxin, in the treatment of diphtheria, will exert any influence on the circulatory apparatus involved in the disease. We are not in possession of sufficient statistical material to decide this question. If we take into consideration that probably the greater number of cases of death in diphtheria are due to heart disease (Heubner) we are forced to the conclusion that the diminution of the death-rate—in as far as the influence of the antitoxin is to be recognized—must, at least in part, depend on the weakening of the action of the poison on the heart.

TUBERCULOSIS OF THE PHARYNX IN CHILDHOOD.

F. Siegert (*Jahrb. d. Kinderheilk.*, *1897*, *xlv*, *123*) says that tuberculosis is one of the most frequent diseases of childhood. During even the first year of life it is by no means rarely observed, and it attacks here as well as at every age the respiratory tract. Thus Froebelius found in 91,370 infants, of which 18,569 came to the post mortem table during the first four months of life, the cause of death to be tuberculosis in 416 or 0.4 per cent.

Tuberculosis of the pharynx is usually looked upon as a secondary miliary tuberculosis appearing during the course of a general tuberculosis.

He gives the history of two cases. The first case presented multiple ulcers of the soft palate, complicating far advanced miliary tuberculosis. There were no intestinal symptoms. The ulcers themselves were superficial, and presented cheesy nodules at their base and on their borders. They extended gradually, and were, as a rule, free from fibrinous deposits. The tuberculosis of the pharynx in this case was secondary to a miliary tuberculosis. In the second case he found changes in the pharyngeal mucous membrane in a robust child with a normal temperature. Only a tentative diagnosis of "tuberculosis" was possible at first, but later in the course of the disease a cheesy degeneration of the lymphatics of the neck, a destruction of the uvula and epiglottis, the occasional appearance of a few cheesy nodules at the margin of the ulcer, an intestinal tuberculosis, and, finally, miliary tuberculosis, made the diagnosis almost certain. Nevertheless, no tubercle bacilli were found in spite of repeated examinations, and the histological examination revealed only very few cheesy tubercles with giant cells in the lymph channels. A cheesy degeneration of all the lymphatic glands with tuberculous ulcerations were found in the intestine.

It is generally believed that tuberculosis of the pharynx is produced by an infection of the pharynx with tubercle bacilli from sputum in pulmonary tuberculosis, or directly from the circulation in miliary tuberculosis. However, an analysis of the cases on record, and the two cases reported by the author, shows that tuberculous laryngitis is rare in these cases, and that tuberculosis of the cervical glands and of the intestines and the mesenteric glands is very common.

If we take into consideration the cheesy degeneration of the cervical glands, which is mentioned in all cases occurring in children, as well as the tuberculosis of the digestive tract, which is nearly always present, and which so often is communicated to other organs by way of the lymph channels, and if we remember that scrophulosis is such a frequent affection of childhood, the explanation of tuberculosis of the pharynx by infection of the mucous membrane of the pharynx through the numerous lymph channels which it contains seems most rational.

THE CAUSES OF NERVOUS DISEASES IN CHILDHOOD.

Zappert (*Therap. Wochenschr., 1897, iv. 256*) said that the etiological causes of nervous diseases in childhood may be divided into four groups:

1. Traumatic causes.
2. Infectious causes—toxic and inflammatory.
3. Hereditary causes—family causes.
4. Psychic causes.

The author discussed the peripheral, the spinal, and the functional diseases of the nervous system in children, in their relation to the above mentioned etiological factors.

a. Peripheral Diseases of the Nervous System.

I. Traumatic influences are of much importance here. These may be either prenatal—as constriction by the amniotic cords, or monstrosities, or they may take place during birth. Paralysis, during labor, usually caused by pressure on Erbs' point, frequently also paralysis of the infraspinatus, the facial or ischiatic may also be involved in the paralysis. In extra-uterine life the facial nerve frequently becomes diseased, as a result of lesions occurring in its neighborhood, for example, in the middle ear, and in the parotid glands.

II. *Infectious (toxic, inflammatory) diseases.* The occurrence in childhood of a primary infectious polyneuritis has not been satisfactorily demonstrated. Of much greater importance and frequency is postdiphtheritic paralysis, belonging to this group, neuritis as a sequal to scarlet fever is also quite frequent. The author has also observed these affections after varicella. Toxic neuritis may be produced by lead, alcohol, and arsenic. The pseudoparalysis, due to hereditary syphilis and rhachitis, also belong to this group. Laryngospasm, spasmus nutans, tetany, and catalepsy, are also related to rhachitis.

III. *Hereditary family diseases* of the peripheral nervous system in childhood include paralysis of the eye-muscles, especially ptosis, facial paresis, and spasm, hemiatrophia facialis; and with affections of the facial nerve, symptoms of degeneration are frequently encountered.

Spinal Diseases.

I. *Traumatic.* With this group are classed hemorrhage of the spinal cord, due to injury inflicted during birth, and during extra-uterine life, commotio spinalis, and lesions of the spinal marrow, caused by caries of the spine.

II. *Infectious.* The primary infectious character of acute poliomyelitis is especially insisted on by French authors, who report the epidemic appearance of poliomyelitis. As a sequal to scarlet fever, measles, and whooping cough this affection was often observed. The infectious character of multiple sclerosis of childhood is frequently maintained, but has not yet been positively demonstrated. Hereditary syphilis leads frequently to anatomical lesions of the spinal cord. Clinically, cases of spastic paraplegia, depending on hereditary syphilis, have been described. Tuberculous diseases of the spinal meninges occur frequently, particularly accompanying tuberculous cerebral meningitis. Muscular spasm in children suffering with acute intestinal diseases or septic affections also belong to this category.

III. *As family-hereditary* affections of the spinal cord in children may be mentioned hereditary ataxia with paresis (Friedreich's disease), hereditary ataxia of a cerebral type, and hereditary spastic spinal paralysis. In this group the author also classes spina bifida and the muscular atrophies.

c. Cerebral Affections.

In the first instance the cerebral diplegias and hemiplegias, which may be caused by a series of etiological factors, may here be named. A number of these are of prenatal origin (porencephalia), and we may have paralysis of the prematurely born, on account of deficient development of the pyramidal tracts. Types of infantile cerebral paralysis, in which the anatomical basis was found to be a meningeal hemorrhage, arising intrapartum, from injuries during labor, are noteworthy. Infantile cerebral paralysis, occurring after various infectious diseases, sepsis, etc., must be considered. Hereditary syphilis also may be mentioned as an etiological factor, especially of the cerebral paralysis accompanying Jackson's epilepsy. Epilepsy, from an etiological standpoint, is covered by infantile cerebral paralysis, and it is usually the result of disease-foci, while true epilepsy is rare in childhood. The various forms of meningitis are of toxic-infectious origin. Abscess of the brain is either traumatic, that is, due to extension from the ear or nose, or metastatic, for example, after bronchiectasis. Hydrocephalus may be congenital or caused by hereditary syphilis or rhachitis. The cause of cerebral tumors is unknown, if tuberculosis be excluded. It may be that congenital causes are at work. Progressive paralysis of childhood presents some connection between hereditary and acquired syphilis.

d. Functional Diseases.

Traumatic neuroses seems to be rare in childhood, but after traumatism to the head we may occasionally see periodical headache and vomiting. Infection is to be considered in tetanus and chorea. The latter disease is related to rheumatism, and is frequently accompanied by heart disease. The occurrence of numerous cases of chorea at certain seasons of the year may speak for its infectious nature. Heredity plays an important part in migraine, and in the development of stigmata of degeneration. In stammering, hereditary influence seems to be a factor. True neurasthenia in childhood is rare. Hysteria, however, is more frequent, and traumatic psychoses undoubtedly play an important rôle here. The hysterical imitation of certain symptoms is of frequent occurrence in childhood, particularly in girls. Pavor nocturnus seems to stand in some relation to hysteria. Tic convulsive should also be classed with this group. The study of the nervous diseases affecting childhood shows that they may easily be divided into these four etiological groups.

ON EXTERNAL APPLICATIONS.

FRIEDLAENDER (*Der Kinderarzt*, *1897*, *lxxxvii.*, *63*) devotes a short discussion to the rules for external application, from which the following practical hints may be abstracted: On the application of cold, an active contraction of the blood vessels is produced not only in the skin, but to a certain extent in the deeper-lying tissues. A collateral hyperemia occurs in those portions which are not affected by the cold. As long as the cold acts continuously, the contraction of the blood vessels will continue, and this of necessity is bound to produce a slowing of the circulation, a defective flow of blood to these parts, and consequently a retardation of cellular activity and a slowing of the physiological and pathological processes of metabolism. In addition, cold acts on the sensitive nerves in a resolvent manner.

When warm compresses are used, a passive dilatation of the blood vessels accompanied by lowering of tone, slowing of the circulation, and increased leucocytosis from paresis of the vaso-constrictors results. By the use of stimulating or Priesnitz compresses, an active dilatation of the blood vessels, accompanied by retention of the tone, acceleration of the circulation, and increase of the red blood corpuscles, is caused through excitation of the vaso-dilators.

As regards the general technic of the various forms of compresses, cooling bags or ice bags will better carry out the effect desired than cold compresses, which are uncertain. It is often good practice to place the ice bag over the moist cold compress, whereby the uncomfortable weight of the ice bladder is diminished. The cooling apparatuses of Winternitz and Leiter, consisting of thin rubber tubing, which is placed over the moist compress, and through which water of any degree of temperature may be made to circulate are to be preferred.

In making warm applications the compresses are either dipped in hot water and covered quickly by impermeable dressings (rubber tissue) or else poultices are made use of (linseed, etc.) which adapt themselves to the body without exerting pressure, retain heat and moisture for a considerable period, avoid frequent renewal, which is so disagreeable to the patient. Friedlaender recommends the use of "fango" for warm cataplasms, a volcanic mud, which is brought up by the hot springs of Battaglia (near Padua). This fango is a smooth, buttery, greyish-brown mass, without odor, of a peculiar, soft elastic and yet tough consistency. Fango is applied by first heating the mud in a hot water bath of 35° to 40° C., and then spreading it in thick layers on the diseased part, and covering it with some poor conductor of heat and rubber tissue. Winternitz-Leiters' tube apparatus is excellent for the local application of heat. Priessnitz's compresses should be applied as cold as possible, not too wet, and well covered by wool or flannel. They should be renewed as soon as dry, as a rule every two hours. If no result is obtained, it is better to desist from the use of stimulating applications. In the first stage, that of congestion, cold applications are indicated; in the second, that of exudation, etc., the hot; in the third, that of regeneration, stimulating dressing should be used.

PERITONITIS IN CHILDREN DUE TO THE PNEUMOCOCCUS.

F. Brun's (*La presse medicale, 1897, No. xvii. 89*) researches on pneumococcus-peritonitis in children strengthen his belief in the opinion already expressed by him that this affection in children presents peculiarities in its course which permits of the distinction, in the greater number of cases, of this form of peritonitis from those due to other causes.

In the first place the greater frequency of this form of peritoneal infection in girls is remarkable (eleven out of fourteen cases), a proportion which is not met with in the peritonitis of adults. This great frequency of pneumococcus-peritonitis in girls is still more interesting from an etiological point of view.

After Boulay has demonstrated the diplococcus lanceolatus in the cavity and wall of the uterus, it might be pertinent to ask whether the same manner of origin may not be attributed to the pneumococcus-peritonitis as well as to a large number of other forms of peritonitis—that is, by a migration from the uterus into the peritoneal cavity by the lymphatic channels or by the tubes. This hypothesis is strengthened by the fact that in all cases in which the localization was positively determined, the process always occurred in the lower segment of the peritoneum, in the iliac fossa, in the true pelvis.

Clinically, the pneumococci-peritonitis always manifested itself as a circumscribed sub-umbilical peritonitis. It commences, like all acute cases of peritonitis, with violent pain in the abdomen, fever, vomiting and diarrhea. These violent symptoms abate within a short time, the fever takes on a hectic character, and a tumor of a doughy or a fluctuating consistence makes its appearance above the symphysis, or in the vicinity of the iliac fossa, and this localization, which is in itself remarkable, becomes almost pathognomonic, when a perforation and sinus formation in the neighborhood of the umbilicus is added. Of fourteen cases collected by the author, three were fatal, eleven recovered; of these, ten had laparotomy done.

THE EARLY DIAGNOSIS OF TUBERCULOUS SPONDYLITIS.

A. Hoffa (*Wiener Medic Presse, 1897, xxxviii. 337*) draws attention in his article to the symptoms from which an early spondylitis may, without much difficulty, be recognized before deformity has appeared. Two symptoms of the greatest importance are to be looked for:

1, pain; 2, a characteristic position of the body from contractures.

Pain, due to spondylitis, is almost, without exception, not complained of in the spinal column, but at the periphery of the spinal nerves, either in the anterior part of the trunk or in the lower extremities. Adults describe it as a dull, pressure sensation, deep below the surface, which is increased with the pulse-beat, especially after meals, and is not so much annoying by its intensity as by its permanence. Very young children show the pain in the drawn expression of the face, in refusing food, and by moaning when moved or touched; older children usually complain of pain in the abdomen, in the chest, or in the extremities. The pain is increased with every expiratory movement. Pain is especially severe at night, and keeps the patient awake. Some times the pain and hyperesthesia is so severe that the patient is not able to bear even the weight of the bed-clothing. In the early stage of spondylitis of the lumbar spine, the patient complains of pain on sitting, but not in the erect position.

The second characteristic symptom for the early recognition of spondylitis is the peculiar manner in which the body is carried. This is due to the endeavor of the patient to immobilize the diseased spinal column so as to avoid movement between the vertebra. Children who are not able to walk, lie unusually quiet in their beds, and cry when they are touched or raised up. In older children we are struck at once with the changed appearance of the trunk. In trying to ease the diseased spinal column by the reflex contraction of certain muscles, their head and trunk is forced into certain characteristic positions. Thus, when the seat of the disease is in the cervical spine, their head is bent forward or to one side, as in torticollis. When the seat is lower down, the position is one of scoliosis, and when the disease is situated in the lumbar region, the patient has a habit of bending backward, giving the impression as though the trunk would topple over. Besides this peculiar position, a peculiar stiffness of the spine is observed, and frequently also the gait is stiff and forced. All movements which might occasion pain are anxiously avoided. Especially chaarcteristic is the act of stooping, in which the knee and hip-joint are flexed, but the spinal column is held perfectly straight. On returning to the erect position the patient will support his hands on the thighs, at the same time strongly flexing his knees and climbing up the thigh with his hands, will straighten the trunk and finally the knees. Movements occur only between the healthy vertebra; while the spinous processes of the diseased vertebra remain immovably fixed. This fixation may be observed by simple inspection, but can be more plainly felt by palpation. This symptom is quite constant, and can always be found, even before any deformity is present. In those cases in which no pain is complained of, the recognition of the fixation by muscular contraction is sufficient for the diagnosis of spondylitis.

As a point of differential diagnosis the pains localized in the back or the loins of full-grown girls may be mentioned. These pains, which usually indicate a beginning scoliosis and are then experienced at the highest point of the curve, or else are simply growing pains, are never associated with a fixation of the back, which disappears after a course of light gymnastics of the spinal column. Again, the question may arise between spondylitis and the so-called neuralgia spinalis, a form of hysteria or traumatic neurosis. The presence of disturbances of sensation in the half of the body, as also disturbances on the part of the organs of sense, readily permit the recognition of hysteria. From rheumatic arthritis of the small joints of the cervical vertebra, the differential diagnosis is made by the fact that arthritis cervicalis makes its appearance suddenly and with febrile symptoms, and attacks only one side, thus causing the body to lean to one side. Again, the pain in this disease is not situated in the spinous processes, but in the bed of the intervertebral processes. We are prevented from mistaking a painful rhachitic kyphosis for a true spondylitis, by the possibility of reducing a rhachitic kyphosis in contrast with the firm fixation of the kyphosis of spondylitis. After spondylitis has been recognized, the treatment to be pursued is absolute fixation of the spinal column. According to the perseverance with which this is carried out, the appearance of abscesses and the formation of great deformity can be avoided.

A CASE OF CONGENITAL SPASTIC PARALYSIS. (LITTLE'S DISEASE.)

H. Weiss (*Wiener Med. Presse, 1897, xxxviii. 794*) presented the following case to the Vienna Medical Society. The seven-year-old boy was born of healthy parents, and had no hereditary taint. He was the second child of a marriage, the issue of which consists of five children. The first child was born in the eighth month of gestation, and died eight days later; cause unknown. The other three children are alive and well. The birth of the patient took place after six and a half months of gestation, labor being very easy and of short duration (one-half hour); no external cause for the premature delivery could be elicited. The child, when small, never kicked with its legs. The parents noticed that the child's extremities seemed rigid, and that their movements were extraordinarily slow. The child was only able to raise itself up from its bed, at the age of three years. At ten months of age the teeth first appeared. Its intelligence was but little developed, and it was able, at the age of two years, to speak only a few words. It was never able to walk alone; it would, when older, creep on the floor, never, however, developing any rapid locomotion in this manner. The patient at the present time is much more intelligent, and understands everything that is said to him.

Present state: Well nourished; height somewhat below normal. The spinal column inclines forward slightly; straightening of the back is only possible by the overcoming of some resistance. The neck is quite movable to both sides, but nodding of the head is somewhat difficult. The muscles of the neck are stiff to the touch. Facial expression not altered. The mouth is generally kept open. Slight convergent strabismus. Motion of the eye-balls slow, the bulbs usually directed upwards. No difficulty in swallowing. The skin of the lower extremities somewhat cool, slightly cyanotic. Strong spastic contractures are present in the hip, knee, and ankle-joints. The flexor and adductor muscles of the hip counterbalance the flexors of the knee and the gastrocnemii. The contractures are variable and are only overcome with much difficulty, when they will gradually return again to their previous position. The foot assumes a position in equino-varus. Only when the patient is supported under the axilla, is he able to walk, with much difficulty, placing one foot upon the other, at the same time crossing the legs. The lower extremities are rigid. The thighs are firmly pressed on each other, while the inner condyles rub against one another; the feet are in the position of equino-varus, as though forming a prolongation of the leg. There is no paralysis proper, but great muscular rigidity. The patellar reflex is increased; the muscular system of the upper extremities is also rigid, but much less so than the lower, and is especially marked on the left side. The biceps reflex is quite distinct; the movements of the arms are retarded; when these are extended the wrist joints are over extended and present slight athetoid choreic movements in the over-extended fingers. Cephalometric findings; total horizontal circumference, 46.5 cm. (nanocephaly); circumference at the ears, 32.5 cm.; parieto-frontal, 23 cm. (somewhat below medium); mesial frontal arch, 14 cm.; mesial arch of vertex, 9 cm. (absolute and enormously shortened in relation to the frontal arch, the typical relation being 1:1); greatest length, 15.7 cm.; greatest breadth, 13.5 cm.; total dimensions = 86.0. Hair grows into the third frontal circle (stigma). The arcus superciliaris is flattened, the arches of the glabellæ are not concave, the plane of the third frontal arch leans forward. The forehead is highly asymmetrical, comparing at its lower portion unfavorably with the right side, and in its upper part unfavorably with the left side. The cavities of the orbit are asymmetrical. We had therefore to deal with a high-graded stigmatized skull, a so-called, broad, micro-cephalus.

From a therapeutic point of view, the physician is not condemned to inertia in this disease. The patient presents a better condition now than at the time of admission. He is still unable to stand, it is true, but his lower extremities are now parallel, and he walks, to a great extent, on the sole of his foot. This improvement was obtained by the application under anesthesia, during abduction of the legs and a dorsal flexion of the feet, of a pair of firm gypsum trousers, which was allowed to remain for a number of weeks. It is probable that even more will be done for him.

PNEUMONIA IN CHILDHOOD.

AUFRECHT (*Der Kinderarzt, 1897, viii., 220*) made a sharp distinction between croupous or lobar and catarrhal or lobular pneumonia. The former is an ascending pneumonia, while the catarrhal form consists of different foci. A leucocytosis is met with in both forms irrespective of the presence of the exuded fibrin, but the etiology is not the same. The terms lobar and lobular pneumonia should not be employed in their differentiation, as we also meet with lobar catarrhal pneumonias; it is more correct to speak of a croupous and a catarrhal pneumonia. Croupous pneumonia is characterized by a congestion of the alveolar capillaries, catarrhal pneumonia by a congestion of the capillaries in the bronchial tubes. The contents of the bronchioles is not involved in the croupous pneumonia of children. In catarrhal pneumonia, the minute bronchioles contain white and red blood corpuscles and epithelium. According to Ziemssen, Bartels and Damaschino, catarrhal pneumonia starts in the bronchial mucous membrane. In both forms the hyperemia is an inflammatory one. The swelling of the bronchial mucous membrane obstructs the flow of blood to the capillaries. In catarrhal pneumonia we find hemorrhages in the bronchial mucous membrane extending as far as the adventitia, especially in measles. We are therefore dealing with an inflammatory hemorrhage of the mucous membrane. As the wall of the bronchus contains numerous elastic fibres, it acts as an equalizing force to the centrifugal power of the lungs.

In croupous pneumonia, the changes are found in the alveoli; exudation of fibrin and of red and white blood corpuscles through the blood vessels; brown hepatization. In catarrhal pneumonia, on the other hand, the disease has its beginning in the bronchioles, and then spreads to the alveoli. Bacteria alone are not sufficient cause for the setting up of a pneumonia. Dürk, in examining fifteen head of cattle, recognized in fourteen pathogenic germs in the lungs without any other change. The author divides catarrhal pneumonia into three groups.

1. A primary one in older children not suffering from any exanthematous disease.

2. That following infectious diseases accompanied by inflammation of mucous membranes. According to Bartels, the disposition to this form decreases with age. The germs of measles, in various ages of the child, invade the organs to a different depth. There is no mixed infection, but the germs of measles are the cause. We meet with catarrhal pneumonias and measles without any exanthems. To this group belong the pneumonias following whooping cough, which frequently end in tuberculosis, as do also those following diphtheria.

3. The third group is met with in cachectic children, due to bad air, poor food, and in rhachitis of the thorax.

In the first group we encounter high fever, in the second a long-continued fever, and in the third fever is absent.

We occasionally elicit dullness over both lower lobes of the lungs in pneumonia, accompanied by bronchial breathing in the upper lobe, which condition has not yet been described by anyone, and this happens in catarrhal pneumonia, which might therefore easily be mistaken for tuberculosis. In severe disease of the lower lobes, the upper do not expand well, so that quiescent air columns are formed.

Prognosis is more favorable in croupous pneumonia than in catarrhal; it is grave in chachectic patients.

Treatment consists in cold packs and expectorants. The neutral tannate of quinine has given good results,in doses of 0.1 (1½ grains) twice to three times daily for children one year of age.

THE RELATION OF OTITIS MEDIA IN CHILDHOOD TO OTHER DISEASES.

Ponfick, of Breslan, (*Der Kinderarzt, 1897, viii., 240*) made the observation that otitis media, presenting so few symptoms that it might be overlooked, frequently occurred in early childhood. He examined 100 children, from the ages of one to four years, who died from various affections, to study the occurrence of otitis media.

NON-INFECTIOUS.	FREE.	UNILATERAL.	BILATERAL.
Congenital heart disease	1	—	1
Burns	—	—	1
Skin affections	—	1	2
INFECTIOUS.	FREE.	UNILATERAL.	BILATERAL.
Infectious skin diseases	1	—	3
Pneumonias	1	—	10
Purulent meningitis, with or without pneumonia	—	—	8
Diphtheria	3	1	2
Scarlatina	—	1	—
Gastro-intestinal diseases (acute)	1	2	5
Gastro intestinal diseases (chronic)	1	5	20
Otitis media only	—	2	6
Bronchitis (acute)	—	—	3
Bronchitis (chronic)	—	—	—
Tuberculosis (chronic)	—	1	3
Tuberculosis with acute exacerbation	1	1	10
Syphilis, congenital	—	—	3
Total	9	14	77

Of these children, 8 per cent. had a perforation of the drum. The genesis is difficult to trace; the disease may have its origin from the pharynx and mouth.

ONE HUNDRED AND SEVENTY-THREE CASES OF CROUPOUS PNEUMONIA IN CHILDREN.

Schlesinger (*Arch. f. Kinderheilk., 1897, xxii., 3*) collected these cases with the object of studying the peculiarities of croupous pneumonia in the child and in the adult. Croupous pneumonia is found in earliest childhood. It increases in frequency up to four years of age, after which it becomes less frequent. Boys show a greater disposition to contract the disease than girls.

The initial rise of temperature takes place (1) in cases without distinct prodromata within about ten hours, (2) where a distinct prodromal stage is present, lasting for one or two days, within three to four hours. The temperature in children is usually higher than in adults. The younger the child, the higher, as a rule, will be the fever. A pneumonia of the upper lobes is accompanied by a higher and more continuous temperature than a pneumonia of the lower lobes. A lysis of the fever is more rarely met with in children than in adults. The fall of temperature at the crisis is greater, especially in younger children, and in pneumonia of the upper lobes; a sub-normal temperature following the crisis is the rule; procrises, as distinguished from pseudocrises, seem to be a peculiarity of childhood. The temperature, pulse, and respiratory curves run pretty evenly together. At the time of the crisis they generally diverge in such a manner that the first two fall in the crisis, while the latter falls in lysis. Another peculiarity of the croupous pneumonia of childhood is the fact that it does not confine itself to the boundaries of the lobes, as does the lobarpneumonia of the adult. Both lungs are not as frequently attacked in children as in adults. Resolution progresses more rapidly, as a rule, than in the adult; a protracted pneumonia very rarely occurs; and a secondary phthisis or gangrene is rare.

As regards therapy, our treatment should be directed towards lowering the fever and preventing heart-failure. Internal antipyretics should be avoided whenever possible. A pack, which envelops the child from head to foot, consisting of sheets which have been immersed in cold water and covered by a woolen blanket is to be preferred to the cold bath in children. This should be changed once or twice after the expiration of ten minutes; between the packs the children, even the smaller ones, should receive one teaspoonful to two children's-spoonsful of strong wine, sherry or cognac. It is usually sufficient to resort to this procedure once or twice a day, especially at night or late in the afternoon, when the temperature and restlessness are usually at their height. Besides this antipyretic treatment, the exhibition of alcohol will be found the best prophylactic measure against heart-failure. At the same time, attention should be paid to prevent the loss of albumin, which would result from insufficient nourishment and the fever. Nourishing soups, bouillon, and milk, should be given in large quantities. In cardiac collapse, champagne, tincture of musk, or oil of camphor was injected subcutaneously, and strong, black coffee was given by the mouth. In the stage of resolution, in convalescence and in bronchial catarrh, some expectorant was ordered. At the same time Priessnitzs' applications were made to the thorax. These applications relieved the pain and acted as an antipyretic.

MAXIMUM DOSES OF SOME REMEDIES IN SUPPOSITORIES FOR CHILDREN.

(*La Med. Mod.*, *1897*, *viii.*, *397*). In adults with a healthy stomach, medicines are best administered by mouth. In children, however, it is often not practicable, as their digestive apparatus is frequently delicate, and will not bear medicines. Stronger remedies easily provoke vomiting and diarrhea, and thus lose their effect. At times the child will also object to the administration of any medicine, and it must be given by force, which is a distressing operation. It is altogether different when the remedy is given *per rectum*, which may be done without the child's being aware of it. The indication for the use of medicated suppositories is, therefore, met with much more frequently in children than in adults. Absorption by the rectum is perfect, but varies in different conditions. It does not take place as rapidly as by the stomach and intestines. We may, therefore, always employ as large a dose as when we give it by mouth, and increase the dose after we have studied the child's tolerance.

It is best to dissolve the remedy in the suppository, and thus gradually get its effect.

The maximum dose of some remedies for children are as follows:

Opium.—Pulvis opii may be given in a suppository in doses of one milligramme (1/66 grain) for each year of the child's age, and this dose may be repeated in severe cases every two hours. Toxic symptoms should be carefully watched for and the remedy discontinued on their appearance. These doses are small ones, and may be increased.

Aconite shows its action in children only in large doses. We must therefore administer it in repeated small doses to obtain its effect. For example, one to two drops of the tincture for a suppository in a year-old child, and increase the dose up to ten or twelve drops in twenty-four hours for each year of life.

Belladonna acts as an excellent sedative in cough, and exerts a very favorable influence on the muscle-fibres of the intestine. We may use one centigramme (1/6 minim) of extract of belladonna in twenty-four hours, divided into three to four suppositories, for every two years of age.

Digitalis.—Powdered digitalis is with difficulty absorbed by the rectum. The tincture should therefore be used, the maximum dose for each year of life being four drops, divided into two suppositories.

Caffein is usually injected subcutaneously. It may, however, be administered in a suppository with equal parts of benzoate of sodium. For example, ten centigrammes (1½ grain) to a suppository, using two daily for each year of the child's life.

Quinine is best given in suppositories, the daily maximum dose being fifteen to twenty centigrammes (2⅓ to 3 grains) in two suppositories, for each year of life.

Antipyrin may be given in the same dose.

Acid salicylic.—Fifty centigrammes (7¾ grains) for each year of life, in divided doses of three or four.

Nux vomica.—One centigramme (1/6 grain) for every two years in three suppositories. Strychnin should only be given to children over ten years of age.

Mercury should only exceptionally be given *per rectum*, and then only in the form of calomel, five centigrammes (¾ grain) in a suppository for each year of life.

Iodine and its preparations are exceptionally well borne by the rectum and fully absorbed. Twenty centigrammes (3 grains) for each year of life, in two suppositories is the maximum dose. Five centigrammes (¾ grain) if it is to be continued.

Bromine preparations should be given in the same doses, except in severe spasm, when we may exhtbit one gramme (15.4 grains) for each yearof life, in two suppositories rapidly following each other. For example, in laryngismus stridulus.

The above is a general review of the drugs mainly used in rectal medication in children. Where tolerance has been established the doses should be increased.

PEDIATRICS

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ORIGINAL ARTICLES

ACUTE GASTRO-ENTERITIS OF CHILDREN.*

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THIS term is applied to those acute morbid states in which the stomach and intestine are simultaneously affected. Either the stomach alone or intestine (small) may be affected, or the same exciting cause may induce both at once to inflammatory action, but why one should suffer at one time, and another escape is not known.

The general lesions are superficial catarrhal inflammation of the entire gastro-enteric tract. In endeavoring to confine my remarks to the text, I shall interpret it, without the minute subdivisions given by authors in the various text-books, which confuse, to a form of acute Summer complaint of our seaboard cities, commencing in mild cases with diarrhea, little or no fever, little gastric disturbance, while in grave cases it is ushered in *suddenly* by high temperature and vomiting. The mild cases exhibit few symptoms during the first few days, outside of the diarrheal discharges, accompanied with the usual loss of appetite, peevishness, and fretting, mostly at night. It is a common thing to hear, "Oh, doctor, we have been up all night with our child, she is so restless." The physician usually is not called to the very large majority of these cases for the first two days, as "teething" is usually blamed for the disturbance. Now the stools become more frequent, thin, green, yellow, or brown with undigested food, especially curdled milk. At this stage an odor of an offensive character appears, sometimes mucous, tongue coated, and aphthous or congested spots within the mouth in very young patients.

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* Read by invitation to "The Georgia Medical Society," of Savannah, Ga., April 12, 1898.

Now a marked pallor and limp condition of the muscles appears, all "snap" leaves the little one, with noticeable loss of weight; this may, under suitable advice, improve within a week or ten days, the old "life" appearing with renewed spirits and appetite. When some "nice thing" the neighbors sent in, being given to the baby, we are suddenly hurried out of bed to find the little one vomiting, passing, perhaps, blood and mucus, great pain and swollen abdomen, and high temperature, perhaps 103°, restless and distressed, stools every hour or oftener; we have a serious condition on our hands, and strict, written-out rules to the nurse or mother, if followed, may after many weeks of varying symptoms, bring the baby to renewed health.

This mild form is, unfortunately, not the only type of acute gastro-enteritis. There is another and a sadder type of this malady, particularly in milk feeders during our heated season. These develop suddenly usually in healthy children—restless, crying, no sleep, distress, hot, dry skin; temperature 105° from the first. The infant is seriously ill, sometimes a stupor exists, sunken eyes, weak pulse, limp, alterating with excitement, or even convulsions; thirst extreme; takes everything offered, only to vomit it again six hours after. Diarrhea accompanies or alternates with vomiting, gas passes frequently, with yellow and offensive fluid, pain accompanying. In thirty-six hours, stools fluid, or alternates with green stains on diaper, fifteen a day, fewer at night; this is due to handling and feeding during the day. In three days, if the child lives that long, mucus appears with blood.

Under the best circumstances, intelligent nursing and feeding, and a strongly constituted child, recovery and rapid convalesence; this is not true in many cases we meet; convulsions, general congestion or exhaustion may destroy the patient.

The distinguishing features of this acute condition are suddenness, severity, brief existence, and usually favorable termination. Give a bad prognosis in marasmus, in those badly fed, and in cases of whooping cough or rhachitis. As to prophylaxis—judgment as to air, feeding, dress, bathing, and general hygiene will give best results. I prohibit cow's milk during the first few days. Napkins, in Summer, should be boiled or immersed in some disinfectant. Day trips to the pines or salts keep the little ones in better resisting condition.

We are sadly in want of suitable excursion boats. Young children in Summer should be kept to the breast as long as possible, consistent with gain in body weight. Very hot days it is safer to diminish the quantity of food, and increase the amount of cool water taken.

As physicians we should educate our patients that all mild enteric derangements require attention in Summer. The old "teething" theory should meet its death-blow at our hands. Skilled milk inspectors should visit the dairies daily, condemning all doubtful milk.

If I could make my patients feel certain that their children would not get weaker or catch cold by out-door exposure, and if I could make them believe that the little ones would not starve by twenty-four hours' fasting, I could easily treat these cases.

Medicinal and dietetic treatment: A purgative, if seen early—preferably, gray powder, rhubarb, or 50 per cent. emulsion of castor oil, one dram every two hours, until eight doses are taken; the purgative is the "sine qua non"; see the actions *yourself;* fasting for fifteen hours, then egg-water brandied, panopeptone with cracked ice every hour or two. Twice a day I usually irrigate the colon, night and morning; I use a large catheter or small rectal tube, using the ball nozzle syringe (fountain) on account of its bulk of tube and free stream. You are all acquainted with the irrigation technique, but gentleness and proper temperature of the water will more than repay any trouble on your part. Sometimes a gallon is required to insure proper washing. Detach the catheter and gently, inch by inch, withdraw it to evacuate all fluid remaining in the pouches. I use common salt, one dram to a quart. The water should not be over 110°, that is extreme; 90° in ordinary cases. My experience in cold rectal irrigations is bad; griping and abdominal unrest resulting.

I have no experience in stomach washing, my patients resist all suggestions on that line. After the first day increasing doses of "panopeptone" or arrowroot with burnt spice brandy, and the irrigations, coupled with hyoscyamus extract and aconite tincture every two hours, complete the cure in mild cases. Drugs, in my hands, have not accomplished the wonders spoken of in books on therapeutics. The bath reduces temperature, and the vaso-motor paralysis is by the mild shock removed and the capillary vessels react and dilate. Bathing face and head with water at 60° promotes still further reaction, and the eye brightens. In a grave case our common sense and tact is more than taxed.

Feeding with barley water, white of egg and brandy, and a little salt, usually tides us to the convalescent stage.

This acute gastro-enteritis must sometimes be confounded with acute milk infection, which presents similar symptoms only in a more rapid and alarming degree; vomiting and purging may lead to fatal termination in twenty-four to thirty-six hours in serious cases. In the treatment do not give a drop of milk; use the treatment outlined above; wash out the intestine, etc., instantly. Dissolve tannic acid in the water, one scruple to a quart, it neutralizes the poison. Sustaining, energetic treatment should be given, with baths, meat broths quite warm, one dram at a time. On the acidity or alkalinity of the stools I base my nutrition. Thus, acid, greenish stools, call for the proteid elements, animal broth, egg-water, etc.; both must be freshly prepared and given in small quantities. Large, frothy alkaline stools call for the carbo-hydrates, flour, three pounds, boiled eight hours, cooled, and after shaving off the gummy outer coating, grating the hard, chalk-like mass to a powder, which, with spiced brandy and hot water, a fine pap can be made; arrowroot answers excellently.

CONCLUSIONS.

Mother's milk if practicable.

If impossible use best artificial foods *without* milk. Condensed milk after six months is a "snare and a delusion," gives no resisting power in disease; on it children do not grow so strong, muscular, or rapidly as they should.

Nightly baths, followed by *olive oil* rubbings, two drams at a time. Oil reduces fever and regulates the functions of the skin, softens it. Spiced poultices in acute period during first thirty-six hours do good.

Fluid extract hyoscyami is the best nightly opiate, one to three drops.

High fever calls for purgatives not antipyretics, bath as outlined. Few drugs are good, phenacetin, salol, bismuth, sulpho-carbolate zinc are worth trying.

Use rectum for temperature. Beef tea ordinarily no good. Gray powder or calomel and sodii bi carb. if stools are acid. If alkaline, substitute bismuth for the sodii bicarb. (with calomel). Carry litmus paper to test the stools, it will pay you.

In convalescent patients sterilized or peptonized milk can be tried if source of milk is known, and good, otherwise not. There should be no exposure to sun in Summer. Street-car rides are "God-sends" with us. Moderate sunshine and change of air develops the red blood corpuscle, diminishes anemia and promotes appetite and circulation. Never let a child "chill off" even in Summer. When frequency of discharges diminish and temperature rises in convalesence, look out for broncho-pneumonia.

One-half of the fatal cases terminate in the third week. Apply ice to the head very carefully, as children do not tolerate cold long; five minutes on, fifteen minutes off, will sometimes reduce fever and improves diarrhea.

Continued high fever and persistent vomiting, rapid wasting, with severe nervous symptoms denote death. The termination in boils, thrush, broncho-pneumonia or tuberculosis is unfavorable, and relaxed sphincters with high temperature and contracted pupils are bad signs.

Keep the room cool, by towels tacked across windows, wet with ice water every half hour. Keep a large piece of ice in the room. Let the child lie in a small hammock between windows, you will see an improvement.

Don't fail to write instructions for parents at *each* visit.

126 Oglethorpe Avenue.

A CASE OF HYPOSPADIAS.

By Garrett L. Hogan,
Helena, Mont.

THE accompanying illustrations show a complicated Hypospadias. The glans penis is enveloped in a closed pouch of integument (F) continuous with that upon the pubes and scrotum, and is attached on the inferior surface to either side of a mucous membrane lined opening (A) formed by a slight bifurcation of the scrotum (C).

The internal layer is normally attached to the cervix (E) on

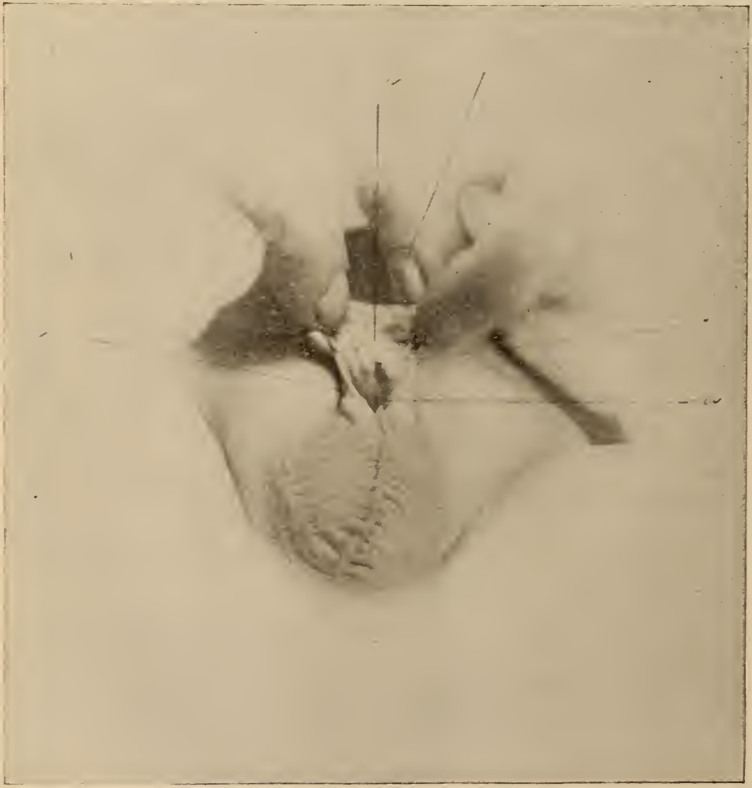

FIG. 1.
Hypospadias.

the dorsal side, reflecting over the glans attached to either side, and continuous with the mucous membrane-like furrow representing the mal-formed urethra (B).

At the root of the penis is a small opening constituting the meatus urinarius.

Erection, excited during micturation, shows the penis to be about one inch in length, indicating also the normally intact corpora cavernosa. The child has a well formed scrotum. A preliminary operation was done, cutting away the pouch above (A) Fig. 2 and stitching the two edges together.

The child did not bear the anesthetic well, and further interference for relief of the deformity was deferred until later in life, when a good result is confidently expected.

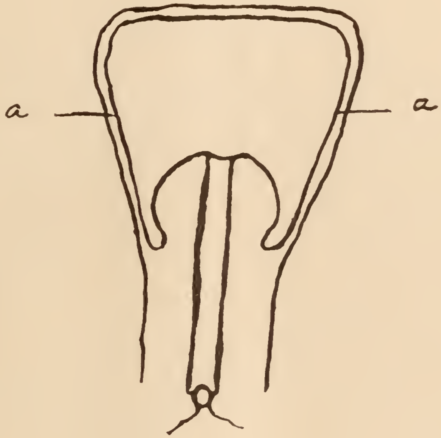

FIG. 2.

The outside lines show the pouch covering. The inside lines show the mucous membrane-like lining and its reflections.

SAFETY-PIN, OPEN, SWALLOWED BY A BABY.

By Joseph Clements, M.D.,
Kansas City, Mo.

SEEING the account by Dr. Solomon, in Pediatrics, issue April 1, I can report a prior case of my own. On July 27, 1890, Mr. R. G. Casey, of McCune, Kansas, wrote me that their baby, Cora, seven months old, had swallowed an open safety-pin six days previously. The following particulars I learned later: It was a common No. 2½ pin, 1½ inches long, ¾ inch from point to outside of the shield. The child was sitting on the floor, and its mother's attention was called to it by its beginning to gag and cough. Taking the child on her lap, and looking into its mouth, she saw the pin, open, hinge end downwards, and instinctively put her finger in the throat to catch and pull it out. This, of course, only pushed it further down and out of sight. The father was now sent for, and Dr. Hyger, of McCune, called in, who, after examination and consultation with Dr. Traylor, also of McCune, decided that nothing further was wise to do but to "wait and watch for results," which the issue fully justified. The pin, it was thought, remained lodged in the throat for about twenty-four hours, for the gagging, coughing, and hemoptysis continued that length of time.

After six days of anxious waiting, during which there was some fever and sore throat. Mr. Casey wrote me at the college here, being willing to bring the child at once to have the pin removed if thought advisable. I wrote, concurring with the view of the other physicians, and counselled waiting and watching so long as no serious disturbances were observable. One week later and during one day and night the babe seemed to suffer considerable pain, and several times screamed out and drew up its limbs. After this nothing of note occurred until August 22, when Mr. Casey wrote me that the "pin had arrived." No bloody stools were seen during the passing of the pin, which occupied thirty-two days in making the journey; and no untoward after effects were seen. The baby is to-day a finely growing girl of eight years.

113 West Seventeenth Street.

SOME REMARKS CONCERNING THE TREATMENT OF WHOOPING COUGH.

By Wm. Thornton Parker, M.D.

THE editorial in a recent number of Pediatrics (April 15), concerning whooping cough is one deserving of careful attention. As early as 1880 I published in the *Medical and Surgical Reporter* an article concerning whooping cough, its contagiousness, and the need of isolation of cases, and also some remarks concerning its prompt and careful treatment.

Dr. Dawson, of New York, has already given to the profession his translation of a German monograph on the subject, and warmly advocated the use of small and repeated doses of quinia sulphate in *solution*. Following his suggestions, I treated several children after the formula which he recommended. The result was remarkably satisfactory. The paroxysms almost entirely ceased in thirty-six or forty-eight hours, and the recoveries were very much better than by the use of the old-time remedies of belladonna, etc. Since that time I have often heard of remedies which were highly recommended, but I have been unable to find anything else so reliable and so desirable. The quinine is an antiseptic and a tonic as well. It should be given only in *solution*, two, four, and six grains to the ounce, a teaspoonful every two hours. This has been the therapy I employed in almost every case I have treated since Dr. Dawson published his pamphlet.

The hygienic treatment of whooping cough is of the greatest importance. The nursery or sick-room must be stripped, washed, cleansed, and disinfected, and thoroughly ventilated. As soon as possible those residing in the interior towns should send the patients to the sea-shore. Those at the sea-shore find the mountains a good change. Prompt improvement is likely to follow the change of air. But generally speaking sea air is *the* atmosphere for children suffering with pertussis. The food must be carefully selected. A bread and milk diet three times a day is about all that should be given in the way of food. Now and then a dropped egg on toast and occasionally some beef tea, but "sweets" must, and the usual good things of the home table, should, for a fortnight at least, be tabooed.

The fact that whooping cough *is* a dangerous disease and one which is highly contagious, should be impressed upon those who have the care of children. The patients must be isolated, and they must not be dosed, no other medicine is required, except that once or twice a week a mild aperient should be given before breakfast. All cough medicines and nauseating vapors are worse than useless.

We have some old-time superstitions to contend with in town and country. I remember coming home one day and finding a neighbor's child at play in the yard with my own child, and I fortunately discovered that the visitor was sick with whooping cough. On that account I sent the little patient promptly to his home, and received a sharp rebuke from his father for doing so. I was excitedly informed that *June* was "the best month" for a child to have this disease, and I ought to consider the opportunity a good one, etc.

Frequently when traveling long distances I have met with children in the sleeping cars, the parents indifferent to the exposure they afforded to the other travelers, adults and children as well.

I think this is a good occasion to remark that the sanitary inspection of cars and railroad stations is something very greatly needed in this country, where our trains are so filled with emigrants of all kinds making long journeys. At a meeting of the Public Health Association, in St. Louis, in 1882, I had the honor to present a paper on this subject, and have been greatly interested in railroad hygiene ever since. It is a subject well worth the attention of the medical profession.

In conclusion, we must remind those in care of such patients that hydrotherapy in cases of whooping cough is not to be overlooked. The warm bath once or twice in the week and the morning sponge bath every day will be found beneficial.

A glass of pure, cold water before breakfast and plenty of out-of-door exercise, with caution as to changes in the weather and careful attention as to suitable clothing—all these details are worth consideration.

The careful physician nowadays does not lightly regard an attack of whooping cough either in infantile or adult patients.

EDITORIAL COMMENTS

Statistical Testimony from Germany in Favor of Antitoxin for Diphtheria

The astounding value of antitoxin as a remedy for diphtheria has now for some considerable time been proved beyond the possibility of cavil. Even those conservative practitioners who always look upon everything new with an eye of distrust, and regard each fresh remedy as a fad, have at last been compelled to give in, and freely acknowledge the great merits of antitoxin. According the *Lancet*, The Imperial Statistical Office has recently published the returns of the causes of death in the towns of Germany of more than 15,000 inhabitants, from the year 1885 to to the year 1895. These returns show that from 1885 to 1894 there were 119,038 deaths from diphtheria or croup. The average number thus being 11,904 per annum. The maximum was reached in 1893 by 15,860 deaths, and the minimum in 1888 by 9,934 deaths. In 1895, when diphtheria antitoxin was first used on a large scale, the deaths went down to 7,266. The diphtheria death rate was 10.69 per 10,000 in the preceding ten years and only 5.4 in 1895, so that the mortality had fallen 49.48 per cent. Of 100 deaths, 4.53 were caused by diphtheria from 1885 to 1894 and only 2.53 in 1895. The decrease of the death rate from diphtheria was almost uniform in every district of the empire. The prevalence of the disease, however, was about the same as it had been for the last twenty years, and it is therefore unquestionable that the serum treatment has had the effect of producing a remarkable improvement. Dr. Barbier reports great success in the treatment of pure diphtheria in France by intubation. Out of fifty-four cases of pure diphtheria, thirteen of which were laryngeal cases, intubation was performed with the result of saving life in each instance.

New York Baby Fold

The situation of a foreigner ignorant of the language and customs in a large city like New York is at all times somewhat pitiable, but when in addition he has a sick wife and a large young family, his position is indeed forlorn. When the wife has been taken to a hospital, the question is what shall be done with the very young children. Poor people have a great objection to sending their children to an orphan or foundling asylum, and it must be confessed that in too many instances they have ample reasons for this dislike to asylums. It is an exceedingly difficult matter to find a home for well babies under three years of age whose parents are unable to care for them. The problem, however, has been solved to a certain extent. The Woman's Branch of the New York City Mission opened some few years ago what is termed a Baby Fold in East Tenth Street, which is described as follows in the New York *Evening Post*: "The Fold occupies two rooms comfortably furnished and fitted, and where the greatest possible care is taken of its juvenile inmates. One day in the week parents may visit their infants. Applications for admission must be made at the Charities Building. Parents who can afford to pay board for their children, pay in proportion to their earnings. They are also asked to supply clothing, yet it if a mother is absolutely unable to pay anything, owing to illness or lack of work, she will not be turned away. No children older than three years are received, and it is a matter of great regret to the managers that many children of the proper age have to be refused for want of room. Sometimes the children are sent to permanent homes in the country if the mother dies or the parents prove unable to keep them. This home is supported by individual charity." It would be well if many more homes of a similar nature were inaugurated.

Infant Mortality, and the Milk Supply of Melbourne

The close connection between milk and infant mortality is a well worn subject, but what connection there can be between milk, infant mortality, and half holidays, does really, at first sight, appear difficult to understand. Such, however, is a phase that the milk question presented at Melbourne last Summer, and when an explanation of the situation is given, the why and wherefore will be plainly seen. Latterly, in that city, the infantile mortality has increased at a most alarming rate, and has been traced to the microbic development in the milk occurring in the hot weather. A short time ago a Factories and Shops Act was passed, one of the provisions of which was to the effect that in all trades, the employes must be granted a half holiday, once a week, of course. The hawkers of milk were among those who participated in this boom, and it is due to this circumstance that the infants have suffered. On the day on which the half holiday takes place the milk is delivered early in the morning to last till the next morning, and in the hot weather (especially during such excessive heat as Australia experienced last Summer) it is found impossible to keep the milk uncontaminated. It is stated that the increase of diarrhea at the Children's Hospital in Melbourne on the day following the half holiday, has been most marked, and is undoubtedly due to the condition of the milk. When the bill was first suggested, one of the honorary medical officers of the Children's Hospital wrote to the Melbourne journals, predicting the evil results to infants that would inevitably follow the milkmen's half holiday. Unfortunately these prophesies have been fully borne out.

The Treatment of Children in Italy

Attention has been called on several occasions in PEDIATRICS and in other American and English medical journals to the condition of the Italian poor children. The foundling hospitals are acknowledged in Italy itself to be in a most disgraceful state, and it now appears that the lot of very many children with parents is as much to be pitied as those in the asylums. Under the heading, "The White Slave," the Rome correspondent of the *Lancet* writes a scathing article on the subject, and says: "Every year the great seaport of Marseilles witnesses the disembarkation of thousands of Italian children, 'raccalti a branchi' (gathered together in droves), whose destination is service under the 'impresari,' to whom they are sold for purposes of 'industry,' and of mendicancy more or less veiled—aye even for purposes of yet darker import—in the great cities of Europe. Taken on shipboard, generally at Naples, these children are landed at Marseilles, after a 'middle passage,' in which the 'padrone' (master), by way of ensuring them to incomplaining obedience, feeds them only on bread and oranges . . . The astute 'padrone' is quite at his ease as regards the law. He can produce not only passports, but even on occasion the 'contract' duly certified by the notary. To the parents who have sold their flesh and blood, he pays in advance the price agreed upon. The hardships to which the victims are subjected are rigorously kept dark, their cries stifled, and when they die 'medical' evidence is forthcoming as to the malady 'from which they have succumbed.' On the other hand, they are terrorized by their 'padrone,' that they keep silence, tongue-tied in sheer dread of the punishment awaiting their disclosures." According to the *Tribuna*, one of the most influential journals in Italy, the remedy for this state of things must be sought, not in invoking foreign government to aid in protecting the little Italian "import," but much nearer home. Ought not the home authorities to be more vigilant? How about the police, who so lightly concede passports to the "padrone" and his troupe. How about the harbor officials, who look on this yearly shipment of human blood. . . . It is the public opinion of Italy which in this, as in so many other abuses, is so apathetic, so dormant. There is no movement from within, as in Great Britain, with her prevention of cruelty to children, as in the United States, with their analagous organizations to put a stop to the nefarious traffic.

Hereditary Syphilis. At the meeting of the New York Academy of Medicine, on February 10, the subject for discussion was hereditary syphilis. The paper, read by Dr. L. Duncan Bulkley was an able resumé of the investigations made within the last few years by scientific men in different parts of the world. It is pointed out that Fournier made the distinction between syphilis acquired with conception and that acquired during intra-uterine life. The former alone would be called "hereditary syphilis," but for practical purposes hereditary syphilis may be considered as synonymous with congenital syphilis. Some statistics, showing the feeble vitality of syphilitic children, were then given. It was stated that in one Vienna hospital, of sixty-one children born syphilitic, fifty-nine died. On the much-vexed question of the transmission of syphilis, Dr. Bulkley expressed his belief in its being transmitted to the third generation. Regarding this point, it should not be forgotten that transmission to the third generation is interpreted in different ways by various modern writers. We presume, however, that Dr. Bulkley is in agreement with the interpretation placed upon the expression by the majority of English-speaking authorities, who term the disease, when twice transmitted, transmission to the third generation. Dr. George Ogilvie, referring to immunity, remarks: "That the hereditary transmission of syphilitic immunity is a remote possibility, and that the attenuation of syphilis whenever it takes place is effected by the improvement in hygienic preventive and therapeutic measures." Dr. F. R. Sturgis, at the New York meeting, very truly said that the chances were very much in favor of the child if the father alone were syphilitic and again, that the father may be treated for syphilis but the mother must be treated. With respect to Colles' law, opinions differ considerably. Fournier and Diday state emphatically that "if a women bear a syphilitic infant, she must, of necessity, have had the complaint herself. Mr. Jonathan Hutchinson affirms that exception to Colles' law means re-infection, while Dr. George Ogilvie considers that this view of the case has not been proven. On the whole, it would appear that the theory of transmission to the third generation will require further and more convincing proofs than have as yet been adduced before it is regarded as conclusive, and we fear that until the general practitioner rouses himself from his apathetic state of mind regarding the question, this result can hardly be looked for.

Does Vaccination During or After the Incubation Period Modify Small-Pox

Many able and experienced general practitioners are still of the opinion that vaccination in the prodromal or during the early eruptive stage does modify an attack of small-pox. Mr. Furley, a well-known physician in Edinburgh, some years ago advocated the treatment of small-pox by vaccination, and seemed to think that it modified the course of the disease. But notwithstanding all this, the general trend of opinion is against these views. Dr. Collison, from the experience gained in Middlesboro during the epidemic which has prevailed in that town for some time past, speaks thus: "So far as I have been able to learn from vaccination modifying small-pox during the incubatory and early eruptive stage, that it by no means infrequently happens that vaccination, even during the early incubatory period, fails to modify the disease, and he goes on to suggest that the incubation period cannot be fixed at less than sixteen or seventeen days, instead of at fourteen days, as usually given in textbooks. Dr. Berry, Medical Officer of Health, of Urgan, Lancashire, agrees with Dr. Collison, that the incubation period of small-pox is longer than fourteen days (he puts it at from eighteen to twenty-one days). Dr. Berry also thinks that vaccination has no influence whatever during the incubation stage. If this is so, it goes to prove that vaccinia and variola are distinct diseases, each of which runs its own course. In connection with vaccination it is interesting to note that the British Government has decided to distribute glycerinated calf lymph to public vaccinators. The announcement has been made that glycerinated calf lymph is to be available for all vaccinations, so that the use of humanized lymph must practically cease.

SOCIETY REPORTS

THE NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, April 25, 1898.

Arthur M. Jacobus, M.D., President.

Mother's Milk as an Infant Food.—Dr. S. H Dessau read a paper on this subject. While admitting the vast superiority of breast milk as an infant food, he said that a mother's milk was not always suited to the individual needs of her infant, and that consequently it became the duty of the physician to endeavor to make it suitable before trying other methods of feeding. In performing this duty, it would be well to carefully look into the quantity as well as the quality of the milk. A very common fault was an undue proportion of solids. In endeavoring to remedy this and other similar difficulties connected with the quality of the secretion, the physician should systematically study the condition of the mother's stomach, and determine the quality of her blood by microscopical examination and by ascertaining the percentage of the hemoglobin. Then the indications should be met in accordance with well-known principles of treatment. A very frequent and formidable impediment to suckling was imperfectly developed or retracted nipples. The mother should be instructed to seize the nipple between the thumb and finger, and draw out the nipple many times every day. Where there was not sufficient breast-milk, the mammary gland could sometimes be stimulated to greater activity by the application of a mild faradic current, by the internal administration of a fluid extract of the castor oil plant, or by the external use of fomentations made with these leaves. The diet of the nursing woman is of no little importance. In arranging it, it is well to remember the general rule, that beans, lentils, parsnips and most foods rich in phosphorus are of service in increasing the flow of milk.

Raw Cow's Milk for Infant Feeding.—Dr. Edward F. Brush read a paper with this title. He said that while boiled milk is practically dead as well as sterile, raw milk retains a certain degree of vitality which is inherent and useful. For this reason he looked upon clean, raw milk, devoid of pathogenic germs, as the best substitute for breast milk. The first change which clean milk undergoes is the lactic acid fermentation—a process which, in his opinion, renders the milk more easily digested by the infant, provided it is not allowed to go on to the formation of a thick, hard curd. The next change is the butyric acid fermentation, and lastly comes putrefaction and the formation of ptomaines. Dr. Brush said that it had long been his practice to take milk which was becoming sour, but which had not coagulated, and after hastening the coagulation and breaking up the coagulum, to feed it to infants, and he had never known this kind of milk to create digestive disturbance. When milk is boiled, some of the albuminoids are rendered insoluble and indigestible, and give rise to putrefaction in the intestine. In considering the value of sterilization and pasteurization it should be remembered that heating the milk does not destroy the poisons which it may contain as a result of nervous disturbances in the animal secreting the milk.

The Home Modification of Milk.—Dr. William L. Baner read a communication on this subject, in which he explained his scheme for modifying milk by simple combinations of whole milk and cream. His method is based on two propositions, viz: (1), The proteids and fat are practically equal in whole milk, each being about 4 per cent.; and (2), that the *extra* fat available in any cream is 4 per cent. less than its total fat content. As a mixture of one part of whole milk and three parts of water contains about 1 per cent. proteid, the desired proteid percentage in a given case is obtained by multiplying one-fourth the entire amount of the mixture by the desired percentage. For example, if it is desired to prepare for a feeding eight ounces of milk containing 4 per cent. of fat and 1.5 per cent. of sugar and proteids, using a 12 per cent. cream, one proceeds as follows: Divide the total quantity (8), by the extra fat (8), and multiply by the difference between the fats and the proteids (2.5). The result is 2.5 ounces, or the quantity of 12 per cent. cream to be added. Next multiply the total quantity (8) by the proteid percentage (1.5), divide this by 4 and subtract the quantity of cream (2.5). The result is ½ ounce, or the quantity of whole milk required. The balance, i.e., five ounces would be water. Or, this calculation may be indicated by the following formula, in which Q = quantity, F = fat, P = proteid, C = cream, M = whole milk, and S = milk-sugar:

$$\begin{array}{l}\text{Total whole milk.}\begin{cases}\left.\begin{array}{l}\text{Whole milk containing}\\ \text{12 p. c., extra fat, i.e.}\\ \text{16 per cent. cream....}\end{array}\right\} = \dfrac{Q}{12}\text{ times }(F\text{ minus }P)\\[2ex] \left.\begin{array}{l}\text{Whole milk without ex-}\\ \text{tra fat.............}\end{array}\right\} = \dfrac{Q \times P}{4}\text{ minus }C\end{cases}\\[3ex] \text{Water.........................} = Q-(C\text{ plus }M)\\[2ex] \text{Dry milk sugar................} = \dfrac{(S-P) \times Q.}{100}\end{array}$$

Wheat Products in Infant Feeding.—Dr. L. Duncan Bulkley, in a brief communication with this title, stated that in the case of infants whose nutrition was at fault, particularly when this was indicated by a persistent eczema, he had obtained the very best results from adding a certain wheat product to the food. He did not wish to be understood as favoring artificial feeding, and least of all the numerous proprietary infant foods, for he firmly believed that nature and human experience plainly taught us that breast-milk was ordinarily the food *par excellence* for infants. The wheat product to which he had reference, and which he had used extensively for the past ten years, was prepared according to the following directions, which must be rigorously adhered to:

A teaspoonful of wheaten grits or crushed wheat is put in a pint of cold water in a china receptacle, in a double boiler, at the time of preparing the evening meal, and is allowed to cook slowly for two hours. It is then covered and set aside until morning, when it will be found more or less jellified. Some water should now be added so as to make it quite thin, and it is then cooked for two hours more. After this second cooking it is rubbed through a fine sieve with the bowl of a spoon, more water being added if necessary. The hard and indigestible portions of the wheat are left on the sieve, and the gelatinous mass which passes through contains all the nutritive portion of the wheat. This portion will readily pass through the feeding-bottle. It must be prepared fresh every day. For very young infants, it is sufficient to add one or two teaspoonfuls to each feeding, while older children may take as much as a tablespoonful of it. It is slightly laxative and exceedingly digestible. The philosophy of this method of preparation is as follows: The prolonged heating extracts all the soluble elements of the whole meal, including the starch, gluten, and phosphates, and at the same time sets up a fermentative change which causes a partial digestion of the mass. This fermentation is checked by the second cooking. The speaker added that this wheat product, when rightly prepared, represented the nearest approach to a complete food, next to milk, and it was very cheap and easily procured. A weak solution of this wheat jelly would be found an admirable substitute for barley water in infant feeding.

Absorption of Milk.—Dr. Bulkley asked permission in connection with this discussion to announce a theory that he had long entertained regarding the manner in which milk is absorbed when taken into a healthy infant or adult stomach at a time when the flow of gastric juice is in abeyance. He was of the opinion that under such circumstances the milk did not undergo the various fermentations described by one of the speakers, but was absorbed directly by the lacteals, and passed from there into the vena cava. In a discussion on this subject with the well-known physiologist, the late Dr. Dalton, the latter had expressed the opinion that this theory was probably correct, and Dr. Andrew H. Smith had furnished what was apparently a striking confirmation of it in some experiments on suckling kittens. Having accidentally wounded the jugular vein, he was surprised to find that the blood here was decidedly whiter than that obtained from other parts. Dr. Bulkley said that his personal experience had shown that there was a very great difference regarding the power of individuals to digest and assimilate milk depending upon whether the milk was taken alone, or with other food. In his own case, even the addition of a cracker would produce a noticeable disturbance.

Dr. David P. Austin said that it seemed hard to believe that an infant fed exclusively on milk for the first year of life, never used its liver during all this time. Regarding the proper interval between nursings, he said that a long experience had taught him that it should be, at the very least, three hours, to allow of the stomach completely emptying itself after each meal. Much infantile indigestion would be spared by having the baby nursed at 8 and 11 A.M., 2, 5, and 8 P.M., and at midnight, and not again until eight o'clock the following morning.

Dr. Dessau remarked that such a practice was excellent theroetically, but it would be next to impossible to persuade mothers to carry it out.

PRACTICAL NOTES

Dwarfism.—Dr. Reichel demonstrated a case of genuine dwarfism to the Vienna Medical Society. The patient, a female, was eighteen years old. She measures 116½ cm. in height and weighs 27 kilograms. The patient presents the following congenital abnormities: A large cornea, oval in the horizontal diameter, remnants of the pupillary membrane still present, nystagmus, a narrowed aorta, with hypertrophy of the heart, persistent thymus gland, infantile uterus, great dryness of the skin with coarse follicles, a large tongue and a typical dwarf's nose. The thyroid gland is normal, there are no signs of cretinism nor of rhachitis present. The patient was admitted to the hospital on account of an hysterical hemiplegia, which has now disappeared with the exception of a spastic gait. The reflexes are increased and anesthesia of the cornea is present. The menses made their first appearance last July and remained regular until October, when they ceased.

Prof. Kassowitz discussed the relation between diseases of the thyroid, dwarfism, and congenital anomalies. In the case just reported myxedema was probably not present, nevertheless he thinks that these cases are dependent on the condition of the thyroid gland. In children and adolescents we frequently observe the most varied disturbances in this direction and we see pure dwarfism accompanied by symptoms of myxedema or cretinism. The small, sunken nose (dwarf's nose) was present in every child. Quite frequently we meet with umbilical hernia, which may be demonstrated in three-fourths of the cases in children who are affected with myxedema, cretinism, or who are dwarfs. In the patient presented, the thyreoid gland can be felt, but we do not know whether it is normal; the late development of puberty is remarkable. The speaker recommend treatment with thyroid substance, as its happy influence on dwarfism was known.—*Wiener Medic. Wochenschr., 1897, xlvii. 547.*

Varicella.—Dr. HOCK also presented a child, four months old, who was taken ill with a slight attack of varicella two weeks ago. As a sequal to the healing of the eruption, which appeared chiefly on the abdomen and upper extremities, an impetiginous eczema developed on the scalp and face, being a secondary infection from the healing varicella postules.

Diphtheria in Young Children.

℞ Hydrarg., cyanat....... 0.5 (7¾ grains)
Aq. destill..............125.0 (4 ounces)
Syrup simpl........... 25.0 (6½ drams)
Tinct. aconit........... 0.5—1.0 (7 to 15 minims)

M. Sig.—One coffeespoonful every half hour to two hours.—RAUSCH.

Eczema of the Scalp.

℞ Acidi salicylici................. 0.6 (9 grains)
Petrolati.......................30.0 (1 ounce)

M. Ft. unguent. Sig.—For external use.

Dyspepsia.—THORIZON'S treatment of dyspepsia and gastro-enteritis in infants is as follows:

1. *Acute dyspepsia:* A diet of pure water for twelve to twenty hours, until the acute stage has somewhat abated. At the same time pepsin and dilute muriatic acid is administered, the same plan is followed in the chronic form.

2. *Acute gastro-enteritis:* Diet of water for twelve to thirty-six hours. When vomiting is present, "lavage of the stomach," and large Hegar's enemata. Internally—calomel in the usual doses.

When high fever is present, cool baths, in the algid stage, mustard baths, rubbing the skin with alcohol and administering the latter internally. He also gives subcutaneous injections of caffein and artificial serum.

When the acute stage is passed, benzonaphthol, bismuth, lactic acid, and later, Kefir should be prescribed.

3. *Chronic gastro-enteritis:* An attempt should be made

to check the diarrhea by bismuth-benzonaphthol. Tonic treatment should be employed, and the child must be kept warm.—*Revue de Malade d L'enpao.*

Congenital Displacement of the Kidney.—Wehner reported the case and was the first to attempt operative interference in this condition. The diagnosis was not made until after the operation. The symptoms consist in the presence of a tumor, lying on the promontory or sacrum, and the kidney of this side is absent. At times pyuria or hematuria makes its appearance. The rectum is abnormally situated, namely, to the right of the sacrum. This would be demonstrated by inflating the intestine with air. Palpation of the entrance to the pelvis does not reveal any other origin of the tumor.—*Kal. f. Frauen u Kinderaerzte.*

Traumatic Spondylitis.—Kirmisson, in the *Revue d' Orthopédie*, and Schneller, in the *Munch. Med. Wochenschr*, discuss cases of so-called traumatic spondylitis, i.e., the gradual appearance of a kyphosis of the spinal column after a fall or other injury, accompanied by all the symptoms of tuberculous spondylitis. The explanation of this rare condition is a disturbance of nutrition with a consecutive absorption of the bone from pressure caused by a contusion. Treatment does not differ from that of tuberculous spondylitis.

Insect Bites.—Ottinger recommends for insect bites accompanied by violent inflammatory symptoms, ichthyol, to be applied pure with a camels hair pencil or in the form of a 10 per cent. gutta percha plaster. Its action is rapid and remarkable, and may be explained by the power of ichthyol to constrict the blood vessels.

Diphtheria and Ear Disease.—According to Lommel's post-mortem studies of twenty-five fatal cases of diphtheria, the middle ear was involved in twenty-four by inflammation of such a low degree that it could easily be overlooked in the examination of the patient. True diphtheria was found in two cases. The mastoid cells were involved in every case, and the bony tube was free. For this reason a simple extension from the naso-pharyngeal space could not be assumed. The tympanum was normal in most cases. The mastoid cells were involved in the inflammatory process.

Tracheotomy.—According to Havell-Felixstowe, the inhalation of steam with wine of ipecac, made by adding twenty-eight parts of radix ipecacuanha to 556 parts of sherry wine, is an excellent remedy to keep the trachea free and cause the disappearance of coughing paroxysms and dyspnea in children who have been tracheotomized.

ABSTRACTS

THE TREATMENT OF INSOMNIA IN CHILDREN.

Comby (*La Med. Mod., 1897, viii. 249*). Soporifics are not indicated in infants when insomnia is due to improper food or to disturbances of digestion; in such cases we must remove the cause. Insomnia is often met with in children who are given alcoholic potions, coffee, tea, etc. In these cases a cure is obtained by withholding the cause. Some children sleep restlessly on account of eating too much nitrogenous food; these children should be allowed meat only once a day. If the cause is not found in feeding, insomnia may be due to nervous causes. Before having recourse to soporifics, physical anodynes should be applied, for example, warm baths, before bed-time, of fifteen to twenty minutes' duration. In some children cool baths or even douches will exert a more favorable influence. Finally, we may use the wet pack advantageously two or three times a day in cases of marked cerebral irritation. In children, whose brain is very active, rest to the latter should, of course, be prescribed. Should all these measures prove insufficient, it may become necessary to administer sporifics. One of the simplest of these remedies is orange flower water, which may be prescribed in quantities of twenty to sixty grammes (5 to 15 drams) before bed-time. This remedy frequently induces quiet sleep, lasting the whole night. Opium should be administered, but only in small doses, when insomnia is due to cough or pain. The bromides are always indicated when neurosis accompanied by cerebral irritation is present. Bromide of potassium or sodium may be given in doses of 0.10 (1½ grains) in sweetened water or in syrup or milk. If the child is unable to swallow these remedies, they may be administered in clysmata or in suppositories.

Chloral hydrate in doses of 0.05 (¾ grain) in the first year of life is safe and active, in larger doses it has a bad action on the heart. It may be used in solution, in enema or in the form of suppositories.

A combination of bromide of potassium and chloral is quite effective:

℞	Potassii bromat..........................	
	Chloral hydrat, āā	2.0 (½ dram)
	Extr. hyoscyami	
	Extr. belladonnæ	
	Extr. cannabis indicæ āā	0.02 (⅓ minim)
	Syr. flor. aurant	30.0 (1 ounce)
	Aq. destill..................................	40.0 (1⅓ ounce)

Sig.—A coffeespoonful every hour.

The disulfones employed in recent years are especially indicated in children. Sulphonal may be given internally or in clysmata in doses of

0.10, to 0,15, to 0.25 (1½ to 4 grains) at a dose, according to the age of the child. If sleep is not induced after one or two hours, the dose may be repeated. As regards trional, Claus recommends it in children from one month to one year old, in doses of 0.20 to 0.40 (3 to 6 grains), in children between one and two years of age in doses of 0.40 to 0.80 (6 to 12 grains), in those between two and six years, in doses of 0.8 to 1.20 (12 to 18 grains), in children between six and ten years of age in doses of 1.20 to 1.50 (18 to 23 grains). Comby considers these doses too large, as has seen the temperature fall from 38.5 C. to 34.0 C. in a greatly excited girl ten years of age, suffering with meningitis after the exhibition during the day of one gramme (15 grains) of trional, divided in four doses.

According to his numerous experiments with trional, this remedy proved to be an excellent hypnotic in doses of 0.25 to 0.75 (3¾ to 11½ grains), which was well borne and showed no bad after effects in these quantities. This dose may be repeated every evening, but it would be better to omit it every other night, for the reason that sleep is frequently permanently induced after one to two doses of trional.

BACTERIA AS DISEASE GERMS.

F. Rubinstein (*Therap. Wochenschr, 1897, iv., 443*). There still exists a controversy between the bacteriologists and the older pathological school over the rôle which is played by the bacterium as a cause of disease. While Koch and his pupils still hold largely to the orthodox teaching, that the bacteria *alone* represent the "cause" of those diseases which are designated as bacterial, the opponents of this view will only recognize the bacteria as partial causes and find in certain changes of the tissues, which they designate as predisposition, auxiliary causes of the disease. Some (for example, B. Riffel, in "Die Erblichkeit der Schwindsucht und der tuberculösen Processe") go so far as to deny the etiological influence altogether of the bacilli. Windrath looks upon the bacteria as a product of cell disintegration; Liebreich designates the tubercle bacilli "nasoparasites," that is, parasites in previously diseased tissues. The author has himself expressed similar views. As regards the predisposition of the tissues, he stated that a predisposition for catarrhal diseases may be produced in the pharyngeal mucous membrane by the exhibition of arsenious acid. As soon as the first symptoms of intoxication in the form of dryness of the throat and of the conjunctivæ and a tendency to diarrhea (from an exhibition of 24 mg. (⅓ grain) continuously for two weeks made their appearance, the slightest exposure to fresh air was sufficient, in his own case, to produce a violent catarrh of the naso-pharyngeal mucous membrane. Arsenious acid exerts a reducing action on the blood. The latter becomes richer in carbonic acid gas, because the oxydation of the arsenious acid to arsenic acid deprives it of oxygen. On this depends the fact that the exhibition of arsenic causes deeper respiratory acts, and it has for this reason been employed in emphysema, asthma, and similar conditions. Exhausted tissues also exhibit a decreased faculty to absorb oxygen, and, therefore are surcharged with carbonic acid. These are the causal indications of the chemical changes weich are designated as "disposition." Dr. Soraner's recent paper gives strong support to those views, which assign to the bacteria the rôle of an auxiliary, an incentive, an exitation, as well as to the broader view which sees in their activity only the fulfilment of the death-sentence on tissues which have already been previously undermined in their vitality (nasoparasitism). Therefore the rôle of these "schizomycetes" in the household of nature is to divide the complicated organic albumin corpuscles into simpler combinations. The report made by Prof. Soraner to the "Club der Landwirthe," in Berlin, during the discussion of a paper by Dr. Häfke, "Bacteriologie und Landwirthschaft,' strengthens this view. Prof. Soraner discussed some new plant diseases caused by bacteria, a very dangerous bacteriosis of the potato, found in America, and a disease of the beet which made its first appearance in Slavonia. The animals which eat these diseased beets become seriously ill. The disease, named by Soraner "bacteriosis gummosas," is recognized by an exudate from an injured portion of the beet of a black, inspissated juice, which is alive with bacteria. The proof that the same disease may be produced in healthy beets by innoculation of these bacteria was not successfully accomplished by the author. Dr. Busse, a younger scientist, has been more successful. Following this, Soraner undertook fieid experiments. He tried to make the plant susceptible to the disease by covering it with manure. During this experiment he found that strong lime manure, also muriate of ammonia, and privy manure were injurious to the beets, and, furthermore, that very dry seasons greatly diminished the power of resistance of the beet. Without doubt there exist other plant diseases in good numbers which are to be referred to bacteria; there seeemed, however, always a certain predisposition of the plant itself necessary for the bacteria to become active. If this should be demonstrated, modern treatment, namely, fighting the parasites, would be changed. We would then not attempt to destroy the spores, but rather to strengthen the power of resistance of the organism.

The great similarity between these questions in the pathology of the plant and in the human organism will be denied by no one, and the unity of natural laws leads us to suspect that in the animal body the tissues must undergo certain changes before they can become diseased bacterially.

CONGENITAL RICKETS IN CONJUNCTION WITH TETANY.

N. Berend (*Centralbl. f. Kinderheilke'de, 1897, ii., 220*) discussed this case at the Budapest Medical Society, and presented the patient.

The child was seven days old, 45.2 cm. in length, and weighed 2,500 grammes (5 pounds); the circumference of the head was 32 cm., slightly asymmetric. It was fed with sterilized milk. The child very early exhibited clonic spasms, at times of the left and again of the right side. The squamous portion of the occipital bone was nearly wholly membranous, soft, with gaping fontanelles and sutures. The ribs were quite soft, the extremities of the costal cartileges somewhat voluminous; there was present slight thickening of the epiphyses of the forearms, and the sternum was prominent. The skin had an icteroid hue, and there was exophthalmos of both eye-balls; the pupils slightly dilated and immovable. The whole aspect was that of a severe case of congenital rickets The exophthalmos was probably due to some defect of development in the brain. The previous history was interesting. The child's mother, at present thirty-nine years old, had been suffering with typical tetany for fourteen years. The symptoms were especially marked during the winter and autumn months. Her first child is alive and healthy, at the birth of the second child the tetany developed. This latter child died at two years of age, it was said, from fright. The third child died, aged four days. Six of her children died. Two of them had spasm of the glottis, after previously suffering from clonic spasms. The connection between rickets and tetany in this case seems indisputable.

ASS' MILK IN INFANT FEEDING.

R. KLEMM (*Jahrb. fur Kinderheilk, 1897, xvii., 4*). In attempting to answer the question whether ass' milk might be recommended as a food for infants, the author discusses the following three questions:

I. Does the ass possess the necessary health? This question undoubtedly can be answered in the affirmative. Tuberculosis is a disease from which the ass is exempt. Other diseases to be taken acccount of in this connection are rarely met with in this animal. All things are in favor of the presence in this animal of healthy secretions.

II. Is ass' milk a proper food for the infant and is it similar to human milk?

Ass' milk compares with mother's milk in regard to its albuminoids as follows:

a. The total amount of albuminoids which it contains is nearly the same as that of human milk.

b. The relatative proportion of albumen and casein is nearly the same in both.

c. Both varieties of milk are devoid of the property of precipitating paranuclein, when digested with the pepsin from a child's stomach.

This is the cause of the difficult digestibility of cow's milk.

There is also a closer conformity as regards the proportion of salts between mother's milk (0.2 per cent.) and ass' milk (0.42 per cent.), than between mother's milk and cow's milk (0.7 per cent.). The proportion of sugar present (mother's milk 6 per cent., ass' milk 6.2 per cent.) is almost the same. The quantity of fat contained in ass' milk is insufficient.

The author concludes as follows:

1. Both ass' milk and mother's milk have an alkaline reaction.
2. Ass' milk in its chemical composition, and especially in the relative proportion of its casein and albumen is more like the human milk than that from any other animal.
3. The casein of ass' milk is like the casein of human milk in its

elementary composition as well as in its chemico-physiological action in artificial and natural digestion. It is far superior to the casein of cow's milk.

4. The freedom from germs of ass' milk, which can be obtained by dry feeding, will permit its administration in the raw, and therefore more easily digestible state.

5. Ass' milk supplies sufficient nourishment for an infant at least until the fourth month. Whether it may be necessary after this period to increase its quantity of fatty matter must be determined by further experiment.

6. Ass' milk is taken by the infantile organism during the first three months in the same quantity as human milk, and thus does away with the necessity of imbibing excessive quantities of fluid, as is the case with cow's milk.

7. Ass' milk as well as human milk contains less antizymotic acid than cow's milk, and possesses preventative and curative properties in the catarrhal enteritis of infants.

According to the author ass' milk is undoubtedly the best substitute for mother's milk and its use is indicated whenever human milk cannot be obtained.

ON VARICELLA IN ADULTS.

Lenhartz read a paper on this subject before the Hamburg Medical Society, n which he claims to have seen a few cases of chicken pox in adults. He reports eight cases, amongst which were four adults. All of the adult patients presented an exanthem, which invaded the whole body, extending in two cases to the mucous membranes, presenting all the characteristics pocks; pustules with a highly inflamed areola and the formation of scabs. In all the patients, prodromes and the presence of fever were noted two to four days before the eruption; they all complained of headache, pain in the back, and suffered from constipation. In the first case observed, which undoubtedly coincided with the illness of three children, a high fever, preceded by a chill, made its appearance suddenly during the night of the fifth and sixth day of the illness. All the adult patients presented pretty marked swellings of the inguinal glands, and in three an enlarged spleen could be plainly felt. Two of the patients were severly ill, and the two others were ill enough to keep in bed. The first patient did not fully recover for three weeks.

CONTRIBUTION TO THE ETIOLOGY OF MELENA NEONATORUM.

L. Fischer (*Munch. Med. Wochenschr, 1897, lxiv., 504*). The following case having a favorable termination was reported: Marie M. was born on March 28, 1892, at three o'clock A.M. The labor was normal and without instrumental interference. The mother had previously given birth to two children. During the day the baby was given a few teaspoonsful of sweetened water, nevertheless it had three attacks of vomiting during the night of March 28 to March 29, the vomited matter was congealed blood, and the quantity each time about one childrenspoonful. During the morning of March 29 there occurred four bloody stools at intervals of one to one and a half hours; the blood discharged with the first stool was thick and dark, that of the succeeding ones was fluid and of a lighter color.

Fischer first saw the child at noon. Its appearance was exceedingly pale and weak, of a waxy color, and cool, the pulse was much accelerated and hardly perceptible. He ordered the administration of a few teaspoonsful of warm chamomile tea, the body and extremities to be enveloped in warm flannel, and cold applications, frequently renewed, to be made to the abdomen. He also gave:

℞ Liquor ferri sesquichlorat............. 0.5 (7¾ minims)
Mucil. salep.........................100.0 (3¼ ounces)
M Sig.—One coffeespoonful to be given every hour.

The child became somewhat brighter, and towards evening took the breast for a short time. Toward five o'clock P.M. another light-colored bloody stool occurred.

During the night of March 30 one more bloody passage of a darker color and pappy consistency took place, but from this time on no more blood was passed either by mouth or anus. The medicine, however, was continued for two days.

The infant, which was now regularly nursed at the breast, gradually improved, though remaining very pale, thin, and weakly; it cried a great deal, especially before defecation. Later, from the beginning to the end of February, 1894, the baby suffered with febrile bronchitis. In the middle of March it had an attack of catarrh of the stomach, lasting one week, and again, in the middle of April an attack of bronchitis. During the last two years it suffered repeatedly with severe attacks of gastroenteritis, during which it went into a condition of collapse a number of times. It also frequently contracted a febrile, and usually obstinate bronchitis; constipation was very troublesome; in a few instances it was taken with a condition resembling syncope. Slight hemorrhages occurred a number of times through accidental injuries. On January 18 the author saw the baby for the last time. It is still quite anemic, does not possess much adipose tissue, and the muscular system is flaccid, and weakly developed. Nevertheless its appetite is good and it takes sufficient and nourishing food.

This anemic condition and general weakness, as well as a tendency to intestinal and other diseases, as a rule, remains behind for a long time or permanently in children who have suffered from melena neonatorum.

From an etiological point of view, all those factors which are usually active may be positively excluded in this case. The only fact of importance was the one that the baby's mother always had a great tendency to hemorrhages and suffered from violent hemorrhages as a girl. We therefore have to deal here in all probability with a congenital transitory hemophilia. There must have been present some other factor, however which produced the angiorrhexis or the diapedesis directly or indirectly; and as we are unable to find a direct traumatism, we are compelled to assume this factor to be a congestive hyperemia of the stomach or intestine which occurred either before, during, or after birth. What was the cause of this? The author thought it was due to a late division of the cord. If we consider how greatly the amount of blood contained in the placenta changes and that we may by manual compression of the placenta, drive 60 to 100 grammes (2 to 3 ounces) of blood from the latter into the fetus, while the whole amount of blood in a child weighing 3,000 grammes (6 pounds), for example, is only 158 grammes (5 ounces) there can be no doubt that if we wait before tying the cord until strong uterine contractions occur, or if the cord is even tied during the height of a strong uterine contraction, a notable congestion must take place in the infantile circulatory system, which may lead to angiorrhexis or diapedesis of the mucous membrane of the gastro-intestinal canal.

CLINICAL OBSERVATIONS ON CHLOROSIS IN CHILDHOOD.

Tschernow (*St. Petersburger Medic. Wochenschr*, *1897*, *xii.*, *No. 7*). Chlorosis is a purely clinical conception, characterized by the following changes in the blood: The number of red blood-corpuscles remains normal or are only slightly decreased, the amount of hemoglobin, however, is greatly diminished. The author undertook to analyze the normal blood of children; in healthy children from two to three years of age the specific gravity of the blood is 1,055, amount of hemoglobin about 14.0, number of red blood-corpuscles six to seven millions, that of the white 9,000. This proportion remains constant up to the age of eight years, when the number of red blood-corpuscles are somewhat diminished (to five to six millions).

The change produced by chlorosis in the blood is mainly an auto-intoxication due to pathological processes of fermentation in the gastro-intestinal tract. This change is still further facilitated by affections of the liver, the spleen, and other glands, whose office otherwise is to remove the noxious material from the organism. As an illustration two cases are mentioned:

1. A boy eight years of age had been suffering with a follicular colitis for some time. Examination of the blood gave the following results:

Specific gravity	1,047
Red blood-corpuscles	5,250,000
White blood-corpuscles	11,020
Proportion of the same	1 to 475
Hemoglobin	6.73

After the chronic diarrhea had been relieved, the bodily weight increased and the general health improved. Another examination of the blood (two months later) was made with the following results:

Specific gravity	1,056
Red blood-corpuscles	6,050,000
White blood-corpuscles	10,000
Proportion of the same	1 to 600
Hemoglobin	11.34

2. A boy one and one quarter years of age had frequent, foul-smelling stools, an enlarged liver, and a very large spleen. On improvement of the intestinal function, the spleen began to diminish in size; when diarrhea recurred, the latter again enlarged; the same change, although not in such a marked degree, was shown by the liver. Examination of the blood revealed chlorotic alteration with leucocytosis; after the chronic colitis was cured, the blood again assumed its normal condition.

The other cases acted in a similar manner, with the exception that diarrhea was not always present, but there was present chronic constipation or only gastric symptoms. In every case, however, he had to deal with resorbtion of toxic products from the gastro-intestinal tract. This was also indicated by the frequent occurrence of enlargement of the glands in chlorotic children, as though depôts for the deposition of these toxins. These, of course, are to be removed in the first instance, as only by their removal the chlorosis with the return of the normal intestinal function can be influenced.

STUDIES ON THE ALKALINITY OF THE BLOOD IN RHACHITIC AND NON-RHACHITIC CHILDREN.

W. Stoeltzcer (*Jahrb. f. Kinderheilk*, *1897. xlv.*, *1*). Pommer advanced the hypothesis that the newly formed bone in rhachitis is deficient of lime, for the reason that the lime salts are hindered from being deposited by diminished alkalinity of the blood. Up to the present time no studies as regards the alkalinity of the blood in the rhachitic have been made. The author made such observations on a large scale, and presents his results in the following resumé:

1. In children suffering from no general disease (scabies, gonorrhea, tape-worm, tic convulsif), various results were obtained in the examination. It is impossible to construct a scale from the results obtained of the proportions to be assigned to the individual years of life under normal circumstances.

2. Although the figures found in children not materially ill frequently fall below those found in healthy adults, the observations are not sufficient to corroborate the assertion made some time ago by others, that the alkalinity of the blood in children is normally below that of adults.

3. The lowest ratio met with was 354. It was found in a patient twelve years old, with quite a severe attack of typhoid fever in the remittant stage.

4. The highest ratio was 468, thus being higher than that found in

healthy adults. The case was that of a boy four and a half years of age, poorly nourished, who was feverish for ten days, suffering with tuberculosis of the spine, whooping cough, and a severe form of rhachitis.

5. The children mentioned above, being the only ones who, when examined, had been feverish for some time, the author was only able to maintain this one fact regarding the alkalinity of the blood in fever, that in febrile diseases a very low alkalinity or a very high alkalinity of the blood may be present.

6. As regards the conditions of nutrition, a high as well as low ratio of alkalinity were found present in well-nourished children, as well as in those poorly nourished. Therefore the alkalinity of the blood does not seem dependent on the condition of nutrition.

7. If we compare children who are constantly gaining in weight with those who are constantly losing in weight, we find, as a general rule, a higher ratio in those who are gaining. This is also not decisive, for we also meet with a very low ratio, so that a constant ratio here does not obtain.

8. Rhachitis has no influence whatever on the alkalinity of the blood. Both high and low ratios are met with just as in non-rhachitic children.

9. It is remarkable that in children who were examined while suffering from whooping cough, pretty high figures were, without exception, met with. It may be that this fact has some connection with the vomiting which accompanies whooping cough. That the alkalinity of the blood is raised by frequent vomiting was observed a long time ago (Peiper).

A CASE OF EXTRAGENITAL INFECTION AND QUESTIONABLE CONGENITAL SYPHILIS.

A. Aschner (*Monatsh. f. pract. Dermatol., 1897, xxv., 3*) reports the following case:

A female, thirty years of age, married a year and a quarter, gave birth four months ago to a child which was declared at the clinic to be a premature birth; she denied ever having had any venereal disease. The child was perfectly healthy and normal during the first few weeks, only presenting the habitus of a premature birth. When it was six weeks old, however, it developed, according to its mother's statement, a blister on its upper lip, which ruptured and left an ulcer; this was followed in a few weeks by a macular eruption extending over the whole body. About six weeks previously the mother had observed that her left nipple became sore; the wound increased in size, besides this she complained of headache for a few days, and exhibited an eruption covering the whole body.

Status præsens: A lesion similar to a weeping papule is seen on the left side of the upper lip of the child, the whole body and particularly the extremities are covered with a heavy maculo-papulous syphilide, the anus is surrounded by weeping papules, the palms of the hands and the soles of the feet present a psoriasitic syphilitic eruption. Above the left nipple of the mother is to be seen a hard, reddish-brown infiltration, about the size of a crown piece, somewhat eroded in the center and somewhat raised above the surface of the skin; in the left axillary region a number of hard glands of the size of a nut are seen, besides this a severe adenopathy and an extensive, heavy roseola.

Taking in consideration that the child was a premature delivery, and that the syphilitic symptoms made their appearance at the time in which they are expected in congenital-syphilitic children, the question arose whether the patient was not herself also congenitally syphilitic. The father did not present any signs of a past syphilis, with the exception of a general, moderate lymphadenitis; he claims never to have contracted a venereal disease, and only to having suffered in 1886 from a bubo, which did not suppurate, however.

The anamuesic data and the whole course of the affection in the child were greatly in favor of hereditary syphilis, but the indurated ulcer found in the mother again made the diagnosis very doubtful. According to Colles-Beaumes' law the mother of congenitally syphilitic children is immune, and we only find an extremely small and therefore very questionable number of cases, which militate against this law. In this case, however, the mother was possessed of an indurated ulcer and recent syphilis. We are therefore forced to acknowledge an acquired syphilis, although the characteristic primary lesion and regional glandular swelling was absent in the child. The portal of entrance for the extragenital affection must have been that lesion of the upper lip which also readily explains the mother's syphilis. If the mother, however, had remained intact by chance, the child would have unhesitatingly been declared as congenitally syphilitic, showing once more how difficult is the diagnosis between congenital and acquired syphilis in the infant.

THERAPEUTICS OF BLENORRHEA NEONATORUM.

Pflüger (*Corresp. f. Schw. Aerzte, 1897, xxvii., 357*) condemns its treatment with corrosive sublimate solution, believing that not infrequently the cornea of children is thereby injured. The sublimate-cornea presents a characteristic picture. It does not present Horner's ulceration in the zone of the palpebral fissure. Commencing as a small and only slightly infiltrated spot, the cornea being otherwise clear, the whole zone of the palpebral fissure and frequently far above it, namely, the whole cornea with the exception of an upper sickle-shaped portion, frequently presents, in the presence of an ulcer, a dull, yellowish-gray discoloration, contrasting in a sharply defined line with the transparent sickle-shaped portion. The presence of this picture alarms the expert; the discolored portion will slough without exception. The old treatment, certainly, somewhat modified in the course of time, is still the best one we have. This includes nitrate of silver, boric acid, cold and heat, and lastly a non-irritating preparation of vaselin. Nitrate of silver, which, according to the author's experience, is superior to all organic salts of silver which have been recommended in the past ten years and to all other remedies recommended for the destruction of the gonococci, is now only used in solutions of 0.2 to 2.0 per cent., the nitrate of silver stick can be dispensed with, being too dangerous even in the hands of the physician.

Boric acid for cleansing the conjunctival sac is employed, in a saturated solution, sometimes mixed with equal parts of a physiological salt solution.

Cold, in the form of ice-compresses, is indicated only in the initial stage of the pure, uncomplicated cases, that is, in those cases in which neither a fibrinous deposit, nor deposits within the mucous membrane are present. As soon as the acute stage of edema is passed in these pure cases, after about four to five days, and as soon as membrane shows itself on the conjunctiva, namely, fibrinous deposits in the form of numerous small white or yellowish-white spots, or in the form of larger islets, or exceptionally in the form of a diffuse infiltration, cold will act unfavorably and should be replaced by moist heat, but in the form of warm compresses steeped in boric acid solution.

Under this treatment the fibrinous exudates are most rapidly removed, the conjunctiva becomes softer, more succulent, and of a dark red color.

Nitrate of silver should not be employed until the initial brawny swelling, the diffuse serous, or fibrinous infiltration has subsided, and been replaced by the suppurative stage with its dark color and corrugation of the conjunctiva. It is well to begin with a solution of 0.2 to 0.3 per cent., and only when this is well borne, that is, when the swelling does not become more brawny or a fibrinous exudation makes its appearance, we may gradually pass on to the use of a 0.5, a 1 or a 2 per cent. solution, which should be applied at the height of suppuration, two to four times a day. As the stage of decrease lengthens, the applications may be restricted, and when a single application daily is sufficient to suppress the suppuration, the weaker solutions should be again resorted to. The eyes should be cleansed every half hour or hour, day and night, with a warmed 4 per cent. solution of boric acid, and to avoid the agglutination of the lids during the intervals as well as to obviate the occurrence of ulceration of the palpebral fissures, vaselin should be applied; where the cornea is intact, combined with 4 per cent. of bismuth subnitrate.

This treatment has yielded excellent results in the author's hands. There are some cases, of course, which resist all treatment; fortunately these cases, resembling diphtheria of the conjunctiva, and presenting from the outset a severe diffuse fibrinous infiltration of the tissues, with diffuse sub-epithelial discoloring of the cornea with more softened spots, are very rare. Premature children and those affected with grave intestinal catarrh, offer a bad prognosis. Aside from these cases, however, every child may be kept from blindness by the strict observance of the above plan of treatment.

ON CEREBRAL COMPLICATIONS WHICH ARE FOUND BOTH IN INFANTILE CEREBRAL PARALYSIS AND SIMPLE IDIOCY.

Koenig (*Allgem. Medic. Central Z'f'g, 1897, lxvi., 775*). This subject was discussed in the Berlin Neurological Society. The author pointed out that we frequently meet in infantile cerebral paralysis, aside from the usual symptoms of paralysis, with other complications pointing to some affection of the brain, which have been looked upon in a certain measure as accompanying symptoms of infantile cerebral paralysis. These symptoms to which, among others, epileptic convulsions, spontaneous movements, disturbances of co-ordination, and affections of the nerves of the eye and its muscles belong, he gathers together under the name of "complicating symptoms."

Freunds' theory, that an uninterrupted series probably leads from the mental weakness of infantile cerebral paralysis to total idiocy without any paretic symptoms, seems corroborated by his researches. These latter refer to two groups of cases. The first embraces thirty idiotic children, with no hemiplegic or diplegic symptoms, who, however, present either one or more of the complicating symptoms.

In six cases there existed epilepsy, besides there were choreic movements present in one of these, another presented a partial external paralysis of the oculo-motor nerve, a third an internal ophthalmoplegia, a fourth or fifth a bilateral paralysis of the abducens and nystagmus. In another series of thirteen cases, involuntary movements of the greatest variety were observed, eight cases presented other complications, affections of the visual nerves, strabismus, nystagmus, and paralysis of the abducens. The second group consisted of cases which could be designated abortive forms of infantile cerebral paralysis. These are cases of idiocy which increased in the course of years, and in which could be recognized normal active movements of the lower extremities, slight spasms, and increased tendon phenomena (paraspasmus cerebralis). These spasms form the link of a series which can be traced to a total paraplegia. Later on he discovered cases in which similar conditions existed in the upper extremities (dispasmus cerebralis). That these cases really also belong to infantile cerebral paralysis is furthermore demonstrated by the appearance of complicating symptoms, as well as by isolated post-mortem findings. The following conclusions were arrived at by the author:

1. Cases of idiocy exist in which, although no symptoms of paralysis on part of the extremities, the facialis and hypoglossus are found, there are present a series of other cerebral symptoms, which we recognize as frequent complications of infantile cerebral paralysis.

2. We meet with another group of cases, in which paralysis is absent but which present spasms and increase of reflex; and there exists a series of cases presenting successively increased knee-phenomena to marked paraplegia and diplegia.

3. In both of these groups we find nothing in the previous history and post-mortem appearance, which could in principle separate these cases

from true infantile paralysis; this is especially true of the para- and di-spasms.

4. If we also take into consideration the cases of infantile cerebral paralysis having a normal psychical development, we will obtain the following series, concluding with simple idiocy:

a. Infantile cerebral paralysis with a normal mental condition.

b. Infantile cerebral paralysis with subnormal mental function up to idiocy.

c. Cases of para- and di-spasmus cerebralis accompanied or not by complicating symptoms.

d. Simple idiocy.

A CASE OF TUBERCULOSIS OF THE EXTERNAL GENITALS IN A GIRL FOUR AND A HALF YEARS OF AGE.

F. Schenk (*Wiener Klin. Wochenschr., 1897, x., 788*) reports the following case: The patient was born of healthy parents, and was nursed by a healthy wet-nurse. At this time an itching eruption made its appearance; later measles and whooping cough, which lasted for some time, were contracted. A sister was ill with whooping cough at the same time, which was followed by a pneumonia, from which she died. The patient now spent a great deal of her time in the company of a neighbor's child, which later on died from tuberculosis of the lungs. About two months ago the appearance of enlarged painful glands in the inguinal region was noticed, which were traced to a small ulcer situated on the clitoris. Four weeks later there appeared great tumefaction of the labia majora. During the Summer the child frequently came in contact with patients suffering from tuberculosis. It should be mentioned here that the patient had the habit of frequently scratching her genitals. An examination of the internal organs was negative. In the vestibule of the vagina a loss of substance, 3 cm. (⅓ inch) long and 2 cm. (⅔ inch) broad, flat and covered by a grayish deposit having no sharply defined borders, was discovered. The bacteriological examination of this deposit showed tubercle bacilli present. Both the inguinal regions now presented swollen glands. The ulcer, as well as the glands, were removed by excision. Healing was delayed by the formation of pus, and was only completed after several weeks. Eight months after the operation the child remains perfectly well, and is in perfect health. The removed glands were also found to contain giant cells and tubercle bacilli on microscopical examination. He believes the manner of infection to have been as follows: The child had a habit of frequently scratching her genitals with the fingers; as it saw a great deal of patients suffering from tuberculosis, it is safe to assume that its fingers became contaminated with tuberculous virus. Another explanation is that small ulcers being present on the genitals, their infection by direct contact with tuberculous sputum or feces was easily possible in a place like Reichenhalle.

ILEUS, CAUSED BY CHRONIC PERITONITIS.

A. HOEPFL (*Münch. Med. Wochenschr., 1897, xliv., 672*) was called to see an eight year old girl on July 27 who has been suffering, according to her mother's statement, with digestive disturbances, consisting in frequently occurring pain in the abdomen after eating, and diarrhea for about a year. She had otherwise been well. She has now been suffering for one week with violent belly-ache, and for four days from constipation; vomiting is present as soon as food is taken.

Present state—Aspect, pale; general nutrition, poor; action of the heart, regular and strong; pulse, 80; no fever; the abdomen is soft and somewhat distended; distinct peristaltic movements due to distended intestinal coils are seen in the upper portion of the abdomen, reaching from the right hypochondrium above the umbilicus to the left of the median line; in the ileocecal region a soft tumor is felt, extending from above downward.

The treatment was enemata and opium.

She grew rapidly worse and, therefore, on July 31 an operation was done. An incision was made, reaching from the umbilicus to the symphysis. No omentum presented. A number of intestinal coils, which had formed slight adhesions with the abdominal wall, were found greatly distended and somewhat congested. After these were released, palpation revealed in the region of the pancreas on the spinal column a portion of intestine, which felt thickened and resisting to the touch. The protruding intestine was taken out and covered with towels which had been boiled in a 1 per cent. salt solution. The thickened portion of intestine was removed with a little more difficulty, and proved to be an agglutination of two coils of intestines. Up to this point the intestine was distended by gas, but below this was empty and collapsed. The adhesions were carefully separated. Then it was found that the serosa was absent at both points of adhesion. One of the empty coils presented a purulent deposit on the denuded muscularis, which showed an ulcerated spot; this is not present in the other coil, nor can any absence of the muscularis be here demonstrated. On further examination of the abdominal cavity, there are also found, in the region of the cecum, two empty coils of the intestine agglutinated. On account of the firm adhesions, their separation could only be accomplished in part; a strip of iodoform gauze was placed between the separated surfaces, and was allowed to hang out of the lower angle of the wound. The attempt to replace the distended intestine was unsuccessful in spite of an enlargement of the wound upwards. The former is so greatly distended that the serosa, in a somewhat forcible attempt at reposition, was torn at one point in an oblique direction to the distance of 2 cm. (⅔ inch); it was not sutured together for lack of time. The distended gut was now punctured in about fifteen spots with a fine, hollow needle, and emptied of gas by careful stroking of the gut. From a number of punctures a trace of yellow liquid feces was also seen to ooze. These places were touched with a solution of corrosive sublimate, and irrigated with salt solution. As the intestine gradually collapsed by means of these punctures, it was replaced. The patient was in a state of collapse at the beginning of the operation while the serosa was being sutured, so that narcosis, which had been begun with chloroform, was continued with ether; after temporary improvement collapse again threatened when the reposition was made, so that the anesthetic was discontinued and ether subcutaneously injected. After this some improvement took place. Prognosis at this time seemed very unfavorable. However, she made a very rapid and excellent recovery.

THE TREATMENT OF BURNS BY PICRIC ACID.

Syla-Novitzky (*Monatsh. f. pract. Dermatologie, 1897, xxiv., 8*). This treatment was first suggested by Thiery, later by the English pediatrist, Pomer, who made use of the following solution:

℞ Acid picric.......................... 5.0 (1⅓ drams)
Spt. vini.............................. 80.0 (2½ ounces)
Aq. destill...........................1,000.0 (1 quart)
H. Ft. Sol.—Sig.: Use as directed.

A gauze bandage saturated with this solution is laid on the parts, which have previously been disinfected, and covered with cotton wadding, secured by a bandage; this is allowed to remain in position three days without change, then a new dressing is applied, which is not removed until healing has occurred.

The author has treated eight children from the ages of seven months to ten years in this manner, and comes to the following conclusions:

1. The dressing described above causes a diminution of the pain because it is not frequently changed.
2. The secretion is very slight.
3. Healing by first intention is favorably influenced.
4. The scar is smooth.
5. The treatment is practical and cheap, as very little material for dressing the wound is used.

CONTRIBUTIONS FROM THE DERMATOLOGICAL CLINIC OF PROF. SCHWIMMER.

(*Ungarische Medic. Presse, 1898, iii., 10.*)

I. Eczema.—For easier study, the cases have been divided into different groups, and the polymorphous forms have been placed under the heading of that group in which their most prominent characteristics were found.

(a) *Papuler Acute Eczema* was far more frequently observed on the upper than on the lower extremity; the latter were, as a rule, only affected by some mechanical cause (inunctions with mercurials).

(B) *Impetiginous Eczema* was usually observed on the face and the hairy scalp.

CHRONIC ECZEMA.

(A) *Eczema rubrum* occurred as a rule on the face, but sometimes on the extremities, and more rarely on the trunk.

(B) *Eczema squamosum* occurred, as a rule, on the extremities, but also on the face.

Besides these, cases of E. circumscriptum, E. artificiale, E. marginatum mycoticum, E. consecutivum were also observed.

In the treatment of eczema, the condition of the skin at the time of presentation was always taken into account.

The treatment, as a rule, was as follows:

(A) *Acute Eczema.* In the so-called vesiculo-papuler form, in its acute stage, as we frequently meet with it on the chest, the back, and the extremities:

℞	Flores zinci	
	Amyli pulv	
	Talci	aa 10.0 to 20.0 (2½ to 5 drams)

or the starch and the talcum without the zinc was employed as a dusting powder, especially if the eczema involved much surface. If this form of acute eczema is complicated with much exudation, simple lead water was employed as a dressing.

In the sub-acute stage, the eczema was covered with some simple ointment:

℞	Lanolini	
	Paraffini	
	Ceræ albæ	aa 5.0 (1¼ drams)
	Ol. sesami	35.0 (1 ounce)

To avoid greater irritation, boric acid was never employed in the acute stage and zinc only after the symptoms of irritation had abated. He deprecated the cleansing of an eczema with water, and advised the use of oil instead. The crusts should be removed by oil.

(B) *Chronic Eczema.* The cure of this form of eczema, on account of the accompanying hyperplasia, can only be accomplished if we first make it acute, i. e., if we render the chronic eczema acute by irritating measures. There probably exists no skin-disease, which appeals so strongly to the training and the patience of the physician as this form. We will first begin with the common form of chronic eczema, the chronic squamous eczema. In this case the best irritation will always be the salicylic acid plaster. The following formula is used:

℞	Acid salicyl	2.5 (40 grains)
	Empl. sapo	40.0 (1⅓ ounces)
	Olei sesami	10.0 (2½ drams)

Of course this should only be applied in cases in which the hyperplasia is not great and the affection is circumscribed. In more chronic cases we will have to employ energetic measures. After the salicylic acid plaster has acted sufficiently long, and the eczema has become intensely red from the irritation, the diachylon ointment of Hebra or lead ointment is in order. Frequently, particularly when the eruption is vividly red, the following remedy is indicated:

℞	Ungt. diachylon Hebra	30.0 (1 ounce)
	Flor. zinci	
	Vaselinæ flavæ	aa 10.0 (⅓ ounce)

to which may be added, according to the intensity of the itching, some salicylic acid or carbolic acid, or perhaps menthol. The tar-preparations are especially indicated in the hyperplastic forms, and after the skin has been sufficiently irritated by them, the application of lead has a still better effect. If the eczema has a tendency to spread, if it is red, scaly, weeping, a simple salve is to be employed, and other remedies should be applied after one or two weeks. It may be superfluous to mention that tarry preparations are to be strictly avoided in disease of large surfaces of the body, as the back and the chest.

II. Erythema exudativum multiforme (Hebra).—During recent years the idea has been gaining ground that the excitor of this affection is a bacterium in the blood. Schwimmer attributes this disease rather to a nervous disorder, although its endemic appearance in Spring and Autumn does not permit our denying its contagious character. The efflorences appearing on the back of the hands and arms are treated by the application of Liquor Burowi or lead water. Beside these applications, lead ointment is also used. The internal treatment, partly for the rheumatic pains and partly for the fever, consists in the exhibition of sodium salicylate with antipyrin or phenacetin.

III. Erythema nodosum.—Beside the previously mentioned applications, Schwimmer gives iodide of potash internally with good results, as it seems to influence the disappearance of the nodes. Whether this good result was due to the fact that five or six of his patients were suffering with latent syphilis, we will not discuss. Internally, sodium salicylate, phenacetin, and antipyrin were prescribed.

IV. Purpura rheumatica.—Kaposi adds this disease to the above mentioned forms, and attributes it to a vasomotor angioneurosis.

Schwimmer looks upon this disease as contagious, and different in clinical symptoms from the erythematous forms.

Treatment: Antiphlogistic remedies externally and internally, the remedies mentioned above if hemorrhage is a prominent symptom.

V. Urticaria,—For external application to abate the itching, a solution of alcohol in water may be employed, to which carbolic acid, salicylic acid or menthol may be added. For the itching. the following may be used:

℞	Lact. sulf.	
	Resorcini	aa 5.0 (1⅓ drams)
	Axungiæ porci	50.0 (1⅔ ounces)

In place of resorcin, cade oil may be prescribed or

℞ Acid carbolici	
Acid salicylic	aa 0.20, 0.30 (3 to 5 grains)
Menthol pulv	0.50 (7¾ grains)
Axungiæ porci	50.0 (1⅔ ounces)

Internally, the patient receives a laxative for cleaning out the stomach and the intestinal canal.

Chloride of lime is said to be absorbed by the blood, and there to neutralize the toxines, which reflexly cause the nettlerash on the skin. It is prescribed in two-grain doses.

VI. Herpes.—Herpes zoster was seen in forty-six cases.

The treatment consisted of lead-ointment with opium. After the vesicles have dried and a crust is formed, the process usually comes to an end after the application of a simple ointment. Herpes zoster is generally unilateral; one case, however, presented a typical girdle-shaped eruption on both sides, over the ninth intercostal nerves.

For preputial herpes a protective ointment was used.

VII. Dermatitis.—Anti-phlogistic measures were here applied. Small burns, of the first and second degree, were treated as ambulent cases and rapidly healed under Prof. Schwimmer's ointment, namely, 2 to 5 per cent. ointment of sesquichlorate of iron.

Erysipelas was treated with applications of ice, painting with ichthyol (10 per cent.); and at the border of the sound with the inflamed skin, a 1 per cent. solution of carbolic acid was usually injected, which frequently prevented the extension of the process. In ten cases Marmoreck's streptococcus-antitoxin was employed, in which the fever arose to 40° C. In five to six hours the temperature rapidly sank, though the cure of the affection was not obtained nor death prevented.

No marked result was obtained from a prophylactic point of view, as the erysipelas disappeared in one case, but returned in five or six days. One thing, however, is certain: Marmoreck's antitoxin influences the temperature in a high degree but does not prevent the spread of the affection.

VIII. Psoriasis.—The scales are removed in part by baths, in part by thoroughly soaping. To attain this object the lesions are thoroughly moistened with green soap or with absolute alcohol, and then well washed in the bath. For this purpose the naphthalin-tar soap, recommended by Prof. Schwimmer, which is rubbed into the efflorescence, is admirable. The latter is allowed to remain on for five to ten minutes, and is then removed in the bath. With poor persons, the common kitchen soap may be used.

Only after the scales have been thoroughly removed the real treatment of the psoriasis can be commenced, for then only can the diseased parts be successfully treated by antiparasitic and alterative measures. These remedies we find in tar, pyrogallic acid and chrysarobin.

The patient is anointed with cade oil, and after this has become dry he is placed in a bath for one-half to three-quarters of an hour. After the bath he is again rubbed with oil of cade, or, better still, with pyrogallic acid or chrysarobin. As this treatment, however, often proves too irritating to the skin it is better to use a 10 per cent. chrysarobin or pyrogallic acid ointment, the latter should, however, be made with flexible collodion, in place of lard.

It has not yet been determined which of these remedies is the best On the face and on hairy parts the following ointment is used:

℞	Hydrarg præc. alb.	3.0 (46 grains)
	Acidi borici	2.0 (30 grains)
	Axungiæ porci	30.0 to 50.0 (1 to 1⅔ ounces)

It is, of course, indispensable for the certain removal of the scales to use the naphthalin-tar soap. In stubborn cases, the hairy scalp is, however, also anointed with pyrogallic acid ointment at night, and by day the mercurial ointment above mentioned employed. If, occasionally, an inveterate case of psoriasis cannot be cured either by pyrogallic acid or chrysarobin, success is often obtained by the use of salicyl-plaster.

The pigment-spots which remain behind after treatment frequently disappear of their own accord. Their disappearance may, however, be hastened by the following ointment:

℞	Bismuth subnitr	3.0 (46 grains)
	Hydrarg. præc., albi	2.0 (30 grains)
	Axungiæ porci	20.0 to 30.0 (⅔ to 1 ounce)

As we all know, no patient is secure against a return of the disease.

IX. Prurigo.—Besides the daily bath, the following ointment is recommended:

℞	Olei cadini	
	Lactis. sulf.	aa 5.0 (1⅓ drams)
	Axungiæ porci	50.0 (1⅔ ounces)

In violent prurigo good results have been obtained from Hebra's salve followed by the treatment by tar and baths.

CASES OF NERVOUS ASTHMA IN CHILDREN.

A. Kissel (*Archiv. für Kinderheilkunde, xxiv., 172*) reports five cases of this affection, and says in regard to the etiology of bronchial asthma in children, that nearly all authors are of the opinion that a difference exists in this relation between the adult and the child. In the adult we recognize two forms of bronchial asthma—an idiopathic or so-called essential, and a symptomatic one of reflex origin. He believes that the simplest and most accurate opinion is that asthma is an independent neurosis (Jaccond, Dieulafoy, Descroizilles, Soltman), which expresses itself in paroxysms of dyspnea. This is true whether these paroxysms are caused in a reflex manner or are due to direct irritation of the breathing.

center (the latter is recognized by only few authors, for example, Jolly, Ollivier, Fraenkel, Curschmann, Riegel).

In children he thinks the appearance of asthma is caused by various disturbances of nutrition, especially by scrophulosis, rhachitis, and tuberculosis, and it may occur as a sequal to measles and whooping cough. It is true that we find great changes in the shape of the thorax, but we may assume that these changes were due to disturbances of respiration. Moncorvo mentions that he has observed changes in the shape of the chest in children previous to the appearance of asthmatic attacks. Descroizilles argues against the dependence of asthma on rhachitis. It is difficult to state whether there is any connection between bronchial asthma and previous attacks of measles and whooping cough.

Much more frequently, bronchial asthma in children is related to the various diseases of the bronchial glands, the most frequent of which is tuberculosis. It is often assumed that even a swelling of the bronchial glands is sufficient to produce asthmatic seizures. But the author doubts whether we have facts enough to justify such a conclusion. On the other hand, he has met with many cases in which various respiratory disturbances were found during life, occasionally accompanied by attacks of dyspnea; and, on section, tuberculosis of the bronchial glands was found.

Biedert and Litting describe twelve histories (six cases in children and six in adults) in seven of which the diagnosis made during life was fully corroborated at the post-mortem. The bronchial glands were found enlarged and tuberculous, although no attacks of asthma were observed in any of these patients during life. In the case of Sanné and Barthez, violent coughing paroxysms and the symptoms of a general tuberculosis made their appearance in a boy three years of age, and on post-mortem a cheesy degeneration of the bronchial glands of the size of a hen's egg was found.

Descroizilles maintains that diseases of the bronchial glands is accompanied by symptoms which generally resemble whooping cough. According to Baginsky this affection only rarely takes on the character of nervous asthma. According to the description of d'Espine and Picot, diseases of the bronchial glands are not accompanied by genuine attacks of asthma. According to Gerhardt the attacks of disordered respiration are distinguished from asthma by the negative results obtained in the auscultation of the lungs during the attack.

Bartnez and Sanné admit that true asthmatic attacks may occur in diseases of the bronchial glands, nevertheless their descriptions do not remind us greatly of true asthma. The opinion of so experienced a man as Henoch seems of especial importance. He says: "The pressure of the vagus on the recurrent nerves by enlarged bronchial glands may also produce some nervous symptoms, particularly a change in the voice (hoarseness), paroxysms of spasmodic cough, which are accompanied by whistling inspiration, as in whooping cough, and at times also attacks of asthma accompanied by cyanois of the face and whistling respiration.

Nevertheless, I am forced to confess, on the ground of recent experience, that these cases only occur very rarely. At the post-mortem we often find degenerated, cheesy bronchial glands. which had not caused symptoms during life, so that the children presented only the common picture of pulmonary tuberculosis or tuberculous meningitis."

The case of Geschlin, lately reported, fully corroborates the words of Henoch: A girl, five years old, who had up to that time been perfectly healthy, was brought to the hospital with symptoms of great respiratory disturbances. Tracheotomy was performed but did not relieve her, and she died on the following day. Post-mortem revealed the following:

Close to the point of bifurcation, a small opening was present on the right side of the tracheal wall; the right bronchus was occluded by a prop of the size of a pea. A cavity could be entered through the opening in the trachea which was filled by cheesy masses, which were bounded on the one side by the trachea on the other by the lung. At the site of the bifurcation, the trachea was surrounded by firm, enlarged lymph-masses.

Many investigators have demonstrated that in tuberculosis of children the bronchial glands and the lungs are, as a rule, involved. Notwithstanding this, asthma is rarely met with, and still more curious is the fact that only very rarely attacks of asthma with a fatal issue are reported.

Finally the author carefully examined the bronchial glands at every autopsy he performed. He not infrequently met with marked enlargement of the bronchial glands, but never observed asthmatic attacks in these children during life. Although P. Frank pointed out that in the autopsies of children who suffered from asthma, an enlargement of the thymus or bronchial glands was frequently observed, we can by no means look upon it as a settled fact that bronchial asthma in children (not including various respiratory disturbances of a non-typical nature) has frequently some connection with tuberculosis of the bronchial glands. As to reflex asthma in children, we often meet with this form in irritation of the mucous membrane of the nose and tonsils. A great many cases, as far as we may judge from the reports, do not differ from a pure nervous asthma. Besides these Henoch has further observed four cases of dyspeptic asthma in children and also a number of cases of bronchial asthma.

The author therefore believes that in children as well as in adults bronchial asthma is a purely nervous disease; whether there is any relation between it and scrophulosis, rhachitis, measles, and whooping cough, and diseases of the bronchial glands he is not prepared to admit.

Finally, bronchial asthma in children may be considered rare, if we judge from the rarity of its description. In the Children's Hospital at Olga there were observed in eight years (1887 to 1894), besides the four cases mentioned, only one other case of asthma. During this time 154,427 children were treated, so that one case of asthma occurred in 38,606 patients or 0.0025 per cent. In the Elizabethan Hospital in St. Petersburg, only one case of bronchial asthma was observed in twenty-three years (1871 to 1893) among 14,451 patients. In the Odessa Children's Hospital not a single case of asthma was observed.

PEDIATRICS

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ORIGINAL ARTICLES

A CRITICAL STUDY OF INFANT FEEDING BASED ON RECENT ANALYSES OF HUMAN MILK.*

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THE science of feeding infants artificially is based on the chemical and physical properties of human milk. The great principle which underlies all practical application in this difficult branch of pediatrics is an accurate imitation of nature's earliest food for man. Until a complete and accurate knowledge of metabolism in general, and that of the infant in particular, shall be in our possession, no other method exists by which we can expect a rational solution of the question. Hence an accurate determination of the different chemical compounds contained in human milk is an absolute necessity. But to this day no complete analysis has been given us, owing to the enormous obstacles encountered in this composite mixture. Little by little, however, the true nature of the composition is being elucidated, and while there is yet much to be known, nevertheless the facts already demonstrated may with some satisfaction be utilized *a posteriori* to formulate certain principles. In fact, this has been done for some years, and pediatrists have deduced excellent rules for infant feeding. The ultimate outcome of these deductions, practically applied, has been the recent progress; particularly can we refer to the Walker-Gordon Laboratories, which stand as a monument to the fame of American Pediatrists.

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*Read before the Bethesda Pediatric Society

The European chemists and pediatrists still vacillate between a variety of animal and vegetable foods; but Gaertner's humanized milk is especially advocated. While we cannot deny some advantages, as cheapness, cleanliness, etc., still in its production no new principle is involved; and as to accuracy of composition, it is far inferior to the more exact methods of the milk laboratory.

The pediatrist of to-day knows only too well that the formula of feeding as outlined by Rotch, Leeds, and Jacobi fall far short of the natural product—mother's milk. Rotch, with his immense enthusiasm, gives us no latitude. A study of his text-book and his recent articles certainly implies that the problem of feeding is solved, and success depends merely on the ingenuity of the physician in ordering a variation in the ordinary elements of cow's milk suitable to the digestion and assimilation of the nursling in charge. The constitution is varied as trial shows it to be digested, but the mixture laid down as the standard differs much from mother's milk. Particularly is little effort made to approximate the character and percentage of proteids and mineral matter to the age of the infant.

These deficiencies were recognized both theoretically and practically, and became the incentive for this study. Recently, chemists have furnished us with a great number of carefully made analyses of human milk at different periods of lactation. I refer particularly to those made by Carter and Soldner. In the discussion of this subject I shall also refer to the analyses of Hoffman reported by Heubner, also the earlier analyses of Leeds, Koenig, Klemm, Pfeiffer and others.

An examination of all these tables reveals the fact that in total solids the differences are so slight that it may readily be explained by variations in the milk examined.

But a study of the chemical technique shows no uniformity in the methods employed, and the consequent variation in the individual constituents must in a great measure be attributed to faulty chemical operations.

Carter used Ritthausen's method for the calculation of the proteids, while this procedure is condemned by Soldner and Camerer. From the high proteids and low fat obtained by Carter we must conclude possible errors in his analysis.

Soldner and Camerer after carefully testing the different methods of analysis discarded all the ordinary methods, and the total proteids was calculated from the nitrogen. The nitrogen was determined by the Kjeldah method, and the totality multiplied by the co-efficient of Voit, i. e.,, 6.25. Munk's co-efficient might also be used; this is 6.34. Wroblewski, however, urged that 6.7 is a more accurate factor. Using this co-efficient, the proteids would be a fraction higher.

Objections can be made to this method, but it is far more reliable than results obtained by others. I need only say that the analyses of Soldner are corroborated by Hoffman and also by Johannessen.

It is of less practical utility to find averages of the composition based on analyses throughout the period of lactation. The general average must be calculated from the milk of many healthy mothers at the same periods of lactation.

For practical purposes, I propose that the lactation be divided in the following rather arbitrary but nevertheless convenient periods, called the early lactation periods, viz., first week, second week, third week, fourth week, second month, third month, fourth month, fifth month, and sixth month.

After the sixth month infants are more readily dieted.

In the following table is seen the average composition milk for these various periods. The figures are based on average figures of Soldner and Camerer. The relationship of casein and albumin are taken from the analysis of Koenig. Most chemists do not give the difference of these proteids, as it is very difficult to separate them. Schlossman, in a recent communication, makes the average percentage of albumin about 0.5 per cent.:

Table No. 1.

ANALYSIS OF HUMAN MILK.

Soldner and Camerer, Carter, Koenig.

Time	% N	Fat	R.I.F.	Lactose anhydrous	Proteids	Casein	Lact. albumin	Unknown substance	Ash	Dried subst.
1st wk...	0.33	2.9	53.2	5.5	2.0	0.8	1.2	0.95	0.34	11.7
2d wk...	0.27	3.1	51.5	6.3	1.6	0.9	0.7	0.90	0.27	12.2
3d wk...	0.24	3.4	51.4	6.3	1.4	0.8	0.6	0.80	0.25	12.2
4th wk..	0.22	3.7	51.4	6.4	1.3	0.8	0.5	0.70	0.23	12.3
2d mo...	0.20	3.9	51.7	6.5	1.2	0.8	0.4	0.58	0.22	12.4
3d mo....	0.18	3.5	51.7	6.6	1.1	0.8	0.3	0.50	0.21	12.0
4th mo...	0.17	3.0	51.7	6.8	1.0	0.7	0.3	0.43	0.20	11.5
5th mo...	0.16	2.9	51.7	6.8	0.9	0.7	0.2	0.35	0.20	11.2
6th mo...	0.14	2.7	51.7	6.9	0.8	0.6	0.2	0.27	0.19	10.9

THE CARBOHYDRATES.

Halliburton states that the character of milk sugars obtained from the woman and cow is similar. Serious doubt has been thrown on this statement by Carter in his most careful examination of human milk sugar.

The sugar of human milk has a specific rotatory power of 48.7 degrees, while that of anhydrous lactose is 55.3. Human milk sugar crystallizes in rhomboid plates; lactose in wedge-shaped crystals. By oxidation with nitric acid, more mucic acid is formed than can be given by an equal weight of lactose. Then human milk sugar is less sweet than that of cow's milk. Carter concludes that the sugars are not the same in the two milks, and from differences obtained by the polariscope, Fehlings test, the differential method, and certain chemical tests, he believes there are two sugars in human milk, a crystalline aldobiose and an amorphous substance.

It seems difficult also to free the milk sugar from mineral matter, and it is possible that saccharates of various metals exist in human milk.

The percentages of sugar at the various lactation periods shows a gradual increase as the time advances. This is also strongly brought out by several other analysts. The average daily sugar ingested by the average baby, based on the figures of Holt, will be noticed in table No. 2. From this it is plainly seen that the daily quantity of carbohydrates steadily increases as the infant grows. The significance of this is obvious.

Table No. 2.

AVERAGE DAILY FOOD FOR AVERAGE BABY.

Time	Total milk daily gm.	% Proteids	Total daily Proteids	% Fat	Daily Fat	% Sugar	Daily Sugar	% Ash	Daily Ash	% Unknown subst.	Daily Un'n subs.
1st wk.	300	2.0	6.0	2.9	8.7	5.5	16.5	0.34	1.0	0.95	2.9
2d wk..	450	1.6	7.2	3.1	14.0	6.3	28.4	0.27	1.2	0.90	4.0
3d wk..	510	1.4	7.2	3.4	17.5	6.3	32.1	0.24	1.3	0.80	4.1
4th wk.	600	1.3	7.8	3.9	22.2	6.4	38.4	0.23	1.4	0.70	4.2
2d mo..	730	1.2	8.7	3.9	28.5	6.5	47.5	0.22	1.6	0.58	4.2
3d mo..	760	1.1	8.4	3.5	26.7	6.6	50.2	0.21	1.6	0.50	3.8
4th mo.	825	1.0	8.3	3.0	24.8	6.8	56.1	0.20	1.7	0.43	3.5
5th mo.	880	0.9	8.0	2.9	25.5	6.8	60.0	0.20	1.8	0.35	3.1
6th mo.	910	0.8	7.3	2.7	24.5	6.9	63.0	0.19	1.7	0.27	2.5

THE FAT.

The fat of human milk differs markedly from that of the cow. Notably by a higher refractive index, namely, 51.9° butter-fat 46.1, which seems to show a higher molecular weight. It is well to note that the refractive index is highest during the first week.

The fat does not show a constant gain in the various lactation periods, the percentage gradually increases until the fourth month and then declines.

In Hoffman's analyses, after the third week it remains at about 4 per cent. The daily ingestion steadily increases until the fourth month, after that it is variable.

The fat is the most variable constituent of human milk, and, therefore, it may be safely assumed that small variations at any period play little rôle with the healthful growth of the infant. As to the causation of rickets by a low percentage of fat, we have no definite proof.

THE PROTEIDS.

A study of the recent analyses convincingly demonstrates that erroneous formulæ have been used for infant feeding. Thus we find the percentage of proteids highest during the first week of lactation and gradually diminishing. Moreover, the daily totality varies little throughout the early period of lactation, being 6 to 12 grammes. After the sixth month Soldner holds that the proteids are less than 1 per cent.

Hoffman's analyses show an average of 1.03 per cent. after the third week, and Johnnassen gives an average of 1.1 per cent. All this goes to show that we have regarded the proteids too high, and it is probable that this great excess of proteids given in artificially fed babies has wrought mischief. Schlossman has given strong argumentative facts for the support of the view that babies at the fourth to eighth month fed on high proteids show the greatest mortality. In another place I have reported deaths from thermic fever, all of which occurred in babies who took about 4 per cent. proteids. Carter gives the average percentage of 1.97 per cent., but for reasons mentioned his results are untrustworthy, yet he has also demonstrated the decline in the percentage of proteids.

This gradual decline of proteids had previously been shown by Pfeiffer, Konig, Klemm, and others. Holt, on the authority of Konig, mentions this fact, but utterly disregards it in the adaptation of cow's milk for infant nutrition. Rotch passes over this without much consideration.

The relationship of the principal proteids should be noted, and the high percentage of albumin in the first week no doubt has a high nutritive importance. Wroblewski has found a third proteid containing a high percentage of sulphur. Lactoglobulin also must be considered a constant and essential element.

The chemical differences of the proteids in cow's and human milk are not definitely known. The well-known differences in coagulability, digestion, and assimilation of the caseins need only be mentioned.

Siegfried and his pupil, Wilmaack, have found 1.1 to 1.3 grammes of nucleon in a liter of human milk; cow's milk contains only 0.6 gm. per liter. Of the total phosphorus of cow's milk 6 per cent. is contained in the nucleon, while in human milk it is 41.5 per cent. In fact they state that nearly all the phosphorus in human milk is in organic combination.

However, Szontagh and Wroblewski state that pseudonuclein is not split off by peptic digestion, while it is readily obtained in this way from cow's milk. According to Blauberg pseudo-nuclein is always found in the feces of infants fed on cow's milk, while none is found when fed on breast milk.

Human milk contains more sulphur and less phosphorus proportionately, consequently requires more alkalies for the neutralization of the sulphuric acid formed from the albumin. It seems true that human milk contains proportionately more bases.

MINERAL CONSTITUENTS.

The mineral matter of the milk decreases *pari passu* with the proteids. Indeed the more careful analyses suggest that a constant relationship exists between the two. Yet there are numerous exceptions. The exact value of the metals in the process of metabolism is still undecided. It is a grave mistake, however, to regard all the mineral constituents as salts, and a hypothetical composition, as Rotch publishes in his text-book,is certainly not based on any scientific fact.

According to Bunge sulphates are absent in human milk. There can be no doubt, from experiments of Lunin on mice, that a large proportion of the metals are in chemical combination with albuminoids or other organic elements. The iron in the salt certainly is combined with some organic substance which liberates it very tardily. Its occurrence in the yelk of an egg bound in the nuclein, and its wide distribution in plants in a similar chemical combination suggest a possible attachment. Bunge did not succeed in isolating its compound. For the neutralization of sulphuric and phosphoric acids formed from albuminous substances in the process of oxidation, bases are necessary.

These metals must exist in the milk and must not be attached to inorganic acids.

It would seem reasonable that the attachment be stable and not readily changed by the acid of the stomach; otherwise these bases would weaken the action of the gastric juice. There is a great excess of bases in the ash of human milk, and with exception of chlorides, no salt seems to be necessarily present.

Interesting is the discovery of citric acid, which occurs in the quantity of 0.05 per cent. Hoppe Seyler always finds a small per cent. of lactic acid. These organic acids possibly are combined with bases.

The mineral constituents are ingested in slightly increased quantities as lactation advances. We know nothing as regards the variation of the several metals at different periods of existence. As Bunge has shown, human milk contains all metals in sufficient quantity except iron. The infant must, in a great measure, live on iron obtained in intrauterine life and stored up in the liver.

EXTRACTIVES AND UNKNOWN SUBSTANCES.

One of the most interesting features of the analyses by Solner and Camerer is the large percentage of extractive, and unknown substances. In the first week their totality equals half of the proteids. The practical significance of these is unknown, but, no doubt, plays a most important rôle in the early infantile metabolism. Urea seems to be constantly present. Lecithin exists in much larger quantities than in cows' milk. Creatinine has been found. Cholesterin also seems to be present. Many of these extractives reduce Fehling's solution and therefore are usually found in the percentages of sugar given.

THE GASES

According to Kulz the gases found in human milk are as follows in 100 ccm.:

Total gases	7.09-7.6 ccm.
Oxygen	1.07-1.44
Carbon dioxid	2.35-2.87
Nitrogen	3.37-3.81

When we compare these figures with those obtained by Phlüger in bovine milk, we find that the total gases in the two milks are nearly equal in quantity. But cow's milk contains twice as much carbon dioxid, but only half as much nitrogen.

Having briefly reviewed the work on milk analyses, and thereby established a standard, a comparison of the ordinary methods of feeding shows how far the pediatrist stands from the ideal composition. Human milk is a far more complex mixture than is ordinarily taught. In fact, as Bunge has shown, mice rapidly die when fed on a synthetic mixture of casein, milk sugar, fat, and the salts as usually believed to exist in cow's milk, while they thrive on cow's milk. An artificial mixture of the milk constituents as we know them can not support life.

This remarkable fact should he a warning in our process of disintegration and synthesis in preparing foods. These experiments are definite, but two possibilities remain to explain the result. First, there was a total absence of albumin in his mixture; and, second, the inorganic matter added was in no way bound to the albuminous substances. *A priori*, the conclusion is logical that albuminous substances beside casein, and the albuminates of metals must be present to support life.

Another possibility must be considered, namely, that besides proteids, fat, water, and metals, there are other equally important constituents of foods. The recent analyses of human milk support this view.

The following table gives approximately the methods of feeding infants as recommended by American pediatrists:

Table No. 3.

TABLE SHOWING PERCENTAGES USED BY AMERICAN PEDIATRISTS.

Time.	Fat.	Sugar.	Proteids.
1st week	2.00	5.00	0.75
2nd week	2.50	6.00	1.00
3rd week	3.00	6.00	1.00
4th week	3.50	6.50	1.00
2nd month	3.50	6.50	1.50
3rd month	4.00	7.00	1.50
4th month	4.00	7.00	1.75
5th month	4.00	7.00	2.00
6th month	4.00	7.00	2.25

It will be readily seen that a remarkable difference exists between this dietary table and the natural one obtained by an infant. Particularly are the proteids too low.

Rotch has said, "A rule which has in my experience become almost an axiom is that the age of the individual infant is in inverse proportion to its powers of absorbing solid food, and in direct proportion to the need of a large amount of water in its food." This statement simply means that the younger the infant the more solid food it can absorb, which is certainly not the meaning that Rotch intended to convey, but nevertheless it has an inkling of truth.

It is an erroneous idea to believe that diluting proteids very much with water helps the digestion, as by this procedure the gastric juice is diluted, and consequently digestion is delayed as water and its contained juice must be passed through the pyloric opening before the coagulated casein can be digested. From all the analyses of human milk, the deduction can be safely drawn that the infant requires no more water proportionately after birth than later, in fact much less. Frequently mother's milk caused violent symptoms of indigestion in the early months of infancy, and Rotch attributes these all to a high percentage of proteids, but the truth is that in most of these cases a toxic element is present, as has been demonstrated by Drs. Saunders and Fisch in a paper read before this society.

As a rule other substances, probably leucomains, cause the digestive disturbance in young infants. The high proteids are, however, not necessarily incidental to the toxic leucomains. I do not mean to intimate that high proteids can not alone cause dyspeptic symptoms, but this is more rare than is usually supposed. Casein *per se* is non toxic, and even in large quantities cannot produce some of those poisonous symptoms attributed to them.

The formulæ for feeding by the Walker Gordon Laboratory do not solve the whole question, all young infants fed on the low proteids do not thrive as breast-fed children, and by far the larger proportion suffer from various disorders of nutrition. They gain less in weight, teething is delayed, they have a less resistance to bacteria, etc.

An improvement is needed in feeding young infants. Particularly do we find too little albumin administered, so that *apriori* it would seem beneficial to add some albumin to the milk mixtures.

A comparison of other foods during early infancy with mother's milk gives a still dissimilar composition.

Thus, condensed milk, is usually administered in the first two weeks of life, namely, one part of milk to sixteen of water, has the following composition approximately: Fat, 0.5; casein, 0.5; albumin, 0.1 per cent.; sugar, 4; salts, .1 per cent. (Eagle brand).

Milkmaid brand has about one-third more of solids.

All the patent foods lack in albumin and especially in organically combined metals. In these is found an absence of extractives and unknown substances in milk; consequently none can be recommended and all are, in a large percentage of cases, followed by the various diseases of nutrition.

Prof. Saunders has frequently pointed out a nutritional disorder which he calls "salts starvation"; especially does it follow certain patent foods, the salts of which are deficient, or exist merely as bases neutralized by inorganic acids.

Proteids must be selected that have a sufficient quantity of mineral matter in combination. This is altogether overlooked in the ordinary prescriptions to the laboratory. Cow's milk contains only nine of these unknown substances to 100 of proteids, while human milk contains from 27 to 49 per cent. It is more than possible that these act as stimulants to the young infant, for it is well known that young infants fed on artificial foods suffer from poor circulation. Every clinician has found the cold hands, the mottled cyanotic skin, and the slow pulse, evidences that the muscular-motor apparatus is weak. The apathy and diminished reflexes show that the nervous system is not well nourished, ossification is delayed, and growth is stunted.

Certain errors have been pointed out. What is the remedy?

A dilution of cow's milk can not bring the albumin and extractives to the proper proportion. If it is diluted the albumin should be increased. As the most readily obtained, ovalbumin would seem worthy of trial. Lehman had previously, on theoretical grounds, pointed out that this albumin might be added to make up the deficient proteids. It has been used at different times, but always with rather unfavorable results. In its latest form it is called the Dresden modification.

Worcester has reported favorably upon it. In this the white of egg is coagulated, dried and the powder dissolved in water before mixing with milk.

Hesse has improved this mixture, but he shows only an average gain of 13 oz. monthly in his infants.

We have made experiments on young infants with a mixture of milk, white of egg, and sugar, so that the proportion was as follows: Casein, 0.75; ovalbumin, 0.75; fat, 2.5; sugar, .6; ash, 27. This has reaped no favorable results. Diarrhea developed in most cases. Vomiting ensued, and in all but one there was no gain of weight in ten days. This one infant, which had been suffering from malnutrition and was almost moribund, gained nearly a pound in a week.

The conclusion is forced upon us that ovalbumin does not replace lactalbumin in young infants. It was noticeable that the curds of this mixture were smaller, similar to human milk.

Why the white of egg causes digestive disturbance is not clear, but possibly this is due to the ovimucoid which is found in the proportion of 10 per cent. of solids.

It would seem valuable to extend observations on the digestibility of this albumin, since it is so highly praised in the various diarrheas of infants, while our experiments in ten cases certainly seems to indicate that its digestion is difficult. One case improved, and it is possible that in older children definite indications may be found for its use.

The increase of the albuminous substances by meat juice is objectionable on account of the presence of a large quantity of extractives. Yet Sleffen, father and son, have for years recommended a weak veal broth as a diluent of cow's milk. He believed the salts of veal stimulated digestion and promoted assimilation. It is probable that other substances besides the salts enter into this broth, and perhaps replace some of the unknown substances. It deserves a more extended trial, particularly in older babies.

Leeds humanized milk consists essentially in an increase of soluble albuminoids by predigestion. It has been highly praised by some, yet as a constant food it has most serious objections. Hammersten holds that casein is a nucleo-albumin and by partial peptonization albumin is split off, and by this method Leeds has hoped to solve the question. Partially peptonized milk has been repeatedly tried at the Bethesda Foundling Home, always with less favorable results than raw milk. It has its indications, but as a normal food must be rejected. For it is by no means certain that this albumin split off from the casein by rennet or peptic digestion is identical with lactalbumin or that it can take its place in the infantile metabolism.

Bovine serum deserves a trial for increasing the albumin and other nutritive elements of cow's milk. In the city it could be readily obtained, and a daily supply delivered to the Walker-Gordon laboratories where it could be added to the milk mixtures. We hope to report some clinical experiments on this in the future.

Bunker again has urged the use of acid albumin, originally recommended by Jacobi. The cow's milk is boiled with a minute quantity of hydrochloric acid. But this procedure must produce marked chemical alteration in the compounds, particularly the destruction of nuclein, so that theoretically it can not be recommended. Prof. Saunders' experiments are definitely against its value.

At present the albumin to increase lactalbumin must be obtained from milk. This is most readily accomplished by the addition of whey. In this a great portion of the metals are still in the original combination. Calcium is removed, so is phosphorus, yet as the analyses of Blauberg show large quantities of these two substances are excreted in the feces when fed on cow's milk, so that their reduction probably is not detrimental. At any rate the dilution does not reduce the calcium and phosphorus below those found in human milk.

By the precipitation of casein, an enormous number of bacteria are removed, so this may compensate to some extent for the want of ordinary dilution as far as it relates to micro-organisms.

Whey has the following composition according to Koenig: Proteids, .86; fat, 0.32; sugar, 5.; salts, .65. The proteids consist principally of lactalbumin and lacto-globulin, and a small quantity of proteids split off from the casein.

The following formulæ and their composition would seem rational for the first and second lactation periods:

		COMPOSITION.	
Cows milk (10 per cent. fat)	5 fl. ounces.	Fat	2.50
Lime water	1 fl. ounce.	Casein	0.8
Sugar	96 grains.	Lact	0.80
Whey	14 fl. ounces.	Sugar	5.5
		Mineral	.65
		Unk'n Subs.	.26

SECOND WEEK.

Cows' milk (10 per cent. fat),	6 fl ounces.	Fat	3.1
Lime Water	1 fl ounce.	Casein	0.9
Sugar	174 grains.	Lact.	1.
Whey	12 fl ounces.	Sugar	6.3
		Mineral	.65

By the utilization of cream, cow's milk, whey, sugar and water any composition required may be prepared. It would be useless here to go into details of the variation of ingredients, these being well understood.

Similar mixtures have been used by others. Eustace Smith prescribed a mixture of whey cream and lime water for young infants. Saunders has employed it extensively and with excellent results at all ages.

Kehrer has recommended it highly and it is generally known as the Kehrer whey and cream mixture.

Backhaus has also recommended its use extensively.

Various differences in the details of preparation are noted in these authors but the principle remains the same. It remains the most valuable humanized milk yet extant.

As to the addition of iron salt, it may be said that its utility is very doubtful. An iron—containing nuclein, is probably the best, yet iron in its salts is often added.

Some add the lacto-saccharate of iron. We have used the eisenzucker, also the tartrate of iron and potassium. The beneficial effect of either was not appreciable.

That cane sugar can replace milk sugar in making up the additional percentage has been too frequently shown to need a proof. In fact if the statement of Carter is correct, lactose is also a foreign sugar, and can not be considered equal to the human milk sugar.

I hope in some future paper to give statistics from practice on the theoretical principles above considered.

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THE PARALYTIC TYPE OF IDIOCY AND IMBECILITY.

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VARIOUS forms of cerebral paralysis (spastic palsies) accompanied often by choreiform and athetoid movements, are common among idiots and imbeciles, such cases falling into the large class constituting the paralytic type.

The general division into the three groups of hemplegic, diplegic or paraplegic according as the distribution of paralysis is unilateral, bilateral or paraplegic is useful for description and classification.

The following table gives an approximate analysis of such cases occurring in a population of 600 (406 males, 194 females) feeble-minded children and adolescents at present in the Royal Albert Asylum, Lancaster*:

TABLE SHOWING TYPE OF PARALYSIS:

	M.	F.	Total.
Hemiplegia	9	4	13
Diplegia	17	6	23
Paraplegia	5	9	14
	31	19	50

The difficulty of getting an accurate history in cases of mental defect is well known, and this is especially true in regard to the "age of onset."

As to the paralysis, it is almost impossible to get a definite statement whether it was really congenital or had developed soon after birth. For this reason some of the cases recorded in the following table as commencing during the first year, may

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It should be stated that according to the rules of the Asylum, neither epileptic nor paralytic cases are eligible for admission. In spite of this rule, however, many such cases do become inmates.

have been born with the lesion. The chief point to notice, however, is that the di- and para-plegia have their onset in early infancy, at or soon after birth; while the onset of the hemiplegia occurs, as a rule, during the first three years of life.

That some of the cases which in early childhood were of a hemiplegic type, and in which severe or frequent epileptic attacks supervene, become, as time goes on, more or less diplegic seems very probable:

TABLE SHOWING AGE AT ONSET.

	Hemi.	Di.	Para.	Total.
Congenital	0	6	1	7
First year	6	12	10	28
Second year	5	4	1	10
Third year	2		1	3
Age not recorded		1	1	2
	13	23	14	50

Among the subjects of these palsies we find every degree of mental defect, ranging from profound idiocy through the higher grades of imbecility to mere backwardness.

The degree of paralysis, however, is not always an index of the mental capacity, many of the most crippled cases being fairly close to the normal in intelligence.

The accompanying table gives a broad classification into the two groups of idiot and imbecile.

	IDIOTS.		IMBECILES.		
	M.	F.	M.	F.	Total.
Hemiplegia	5	2	4	2	13
Diplegia	4	2	13	4	23
Paraplegia	2	7	3	2	14
	11	11	20	8	
	22		28		50

In nine of the cases, choreiform, ataxic and athetoid spasms of a severe character occur.

Five of these have well marked double athetosis, while four have exaggerated choreiform and inco-ordinate movements, which are very marked and extreme on any voluntary effort, or under excitement or observation. Lesser degrees of post-hemiplegic tremor and hemiataxia are present in twelve other cases. In all the cases the finer movements of the hand, and the walking and balancing powers of the foot and leg are defective; eleven cannot walk without assistance. Speech is affected in the majority of these cases, and in many of them it is quite absent; in very few is it perfect.

CONDITION AS TO SPEECH.

	Absent.	Imperfect.	Fair.
Male	9	17	5
Female	10	7	2
	19	24	7

Nine of the cases (six males and three females) suffer from epilepsy. Two of these patients are now diplegic, due probably to extension of the cortical mischief, owing to the severity of the fits. The seizures in the nine cases vary in frequency from an average of two fits per. month, in one boy, to forty per month in another. In all the cases the fits are of a severe type, and are more or less unilateral in character at the commencement of the seizure. The tendency of the fits is to become more severe as the patient gets older, and to lead to an increase of the paralysis and of the contractures.

The etiology of these cases is fairly constant:

(1) *Hemplegia.*—Injury, most often by hemorrhage, to the motor region of one side, mainly that area of the cortex supplied by the middle cerebral arteries; followed later by sclerosis or by porencephalus and by a secondary descending degeneration of the pyramidal tract.

The immediate cause of the lesion is generally convulsions with coma (occurring, as a rule, during the first three years of life) due to various exciting causes, e. g., asphyxia neonatorum, teething, whooping cough, fevers, falls, etc. Cases may, however, occur without convulsions or coma.

(2) *Diplegia.*—Injury or destruction of the motor centres of the cortex, followed later by sclerosis and by descending degeneration of the pyramidal tracts.

The destructive lesion generally dates from birth, and is most often due to the accidents attending abnormal parturition,

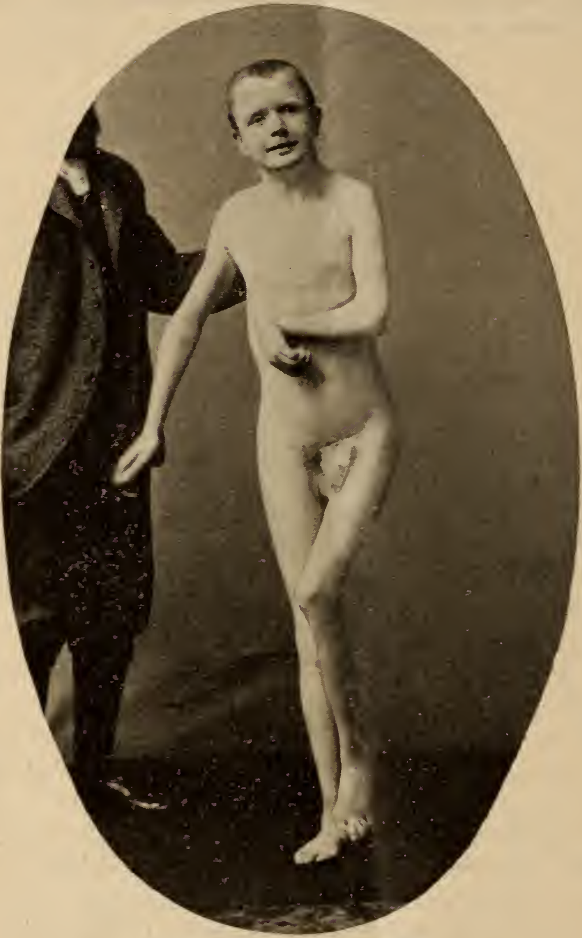

Fig. I. Hemiplegic Imbecile.

e. g., long or difficult labor, asyphyxia neonatorum, convulsions at or soon after birth, injury by the forceps, etc.

(3) *Paraplegia.*—Injury to the motor centres, of less extent, but caused in a similar manner to that found in the diplegia, and occurring at birth or in early infancy.

Thus in the three types of paralysis the essential cause is a cortical injury to the motor region in one or both hemispheres of the brain, due to hemorrhage or inflammation or trauma, occurring at a time when rapid growth and development are going on.

Among some of the exceptional causes assigned in the histories of the fifty cases under review, we find: "Mental anxiety of mother, who is feeble minded and epileptic"; "erysipelas of face and head at eight months"; "fall out of bed at nine months"; "hydrocephalus"; "fall on the head at nine months"; "meningitis before one year"; "influenza at three years"; "meningitis with convulsions at two years"; "maternal fright at fifth month of pregnancy."

The cause is unassigned in ten cases. In six there is a definite history of primogeniture.

Fig. 1 (from photograph). Case illustrating the hemiplegic type.

A. B., aged 17. First-born child. Parents normal and healthy, but some history of mental trouble on maternal side. Both temperate. Three younger children normal in physical and mental condition. Two miscarriages.

Patient was born at full time, and the labor was not abnormally long; no instrument used. Patient not asphyxiated when born, nor was he convulsed soon after birth. Was beginning to walk and talk at two years. There is a history of a fall at two years, followed by several convulsive seizures, after which the hemiplegia was observed. The patient cannot now stand or walk without support. Speech is very imperfect. He is not epileptic.

Left hemiplegia with rigidity and contractures is well marked. Left arm is rigidly adducted, the forearm is flexed at a right angle at the elbow, the hand is actually flexed and contracted at the wrist, the fingers are bent towards the palm. The left leg when at rest is drawn up about two inches from the ground and strongly adducted. The foot is more or less in a position of talipes-equinus. He cannot close the left eye

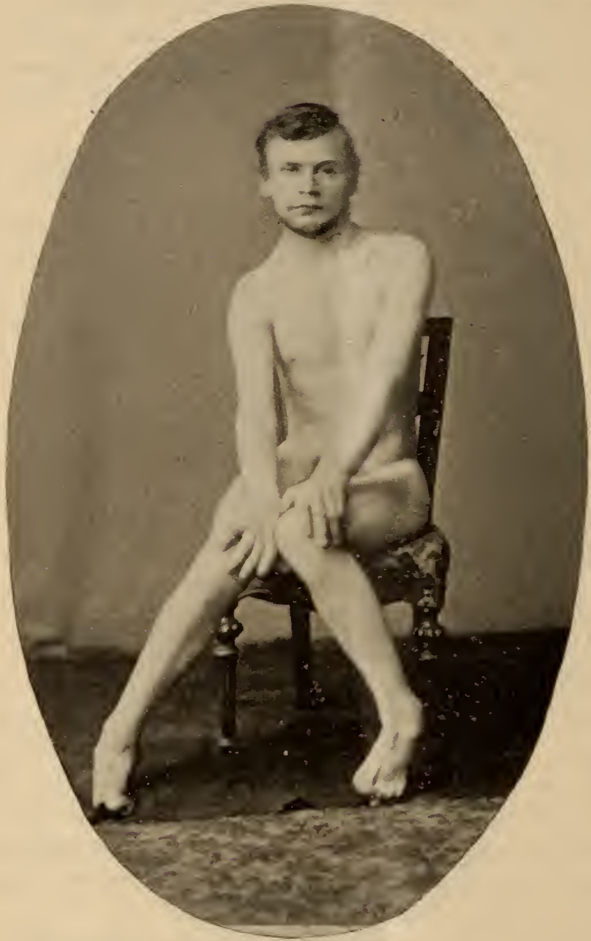

Fig. II. Diplegic Imbecile.

completely. The rigidity is increased by emotion or voluntary effort, at which time also inco-ordinate movements appear.

There is coldness and blueness of the paralysed extremities.

The nutrition of the limbs is shown by the following measurements in inches:

	RIGHT.	LEFT.
Circumference of middle of thigh	15	11½
“ “ “ “ leg	11	8¼
“ “ “ “ arm	8	7
“ “ “ “ forearm	7	4¾

The knee jerk is exaggerated in both legs, left slightly greater. Ankle clonus present in both limbs. Head measures 22⅛ inches in circumference. It is brachycephalic in shape, with a cephalic index of 81.3. The palate is higher than normal. The alveolus is thickened. The teeth are carious and irregular. The boy is a low-grade imbecile, incapable of much improvement.

Fig. 2 (from photograph). Case illustrating the diplegic type.

C. D., aged 22, is the second-born child, the eldest being a girl. There are three other children, all normal in physical and mental condition. Two miscarriages. The parents are both healthy, intelligent, and temperate. The patient was born at full time. Labor was prolonged and difficult; instruments were used. The child was asphyxiated at birth, and was convulsed for three weeks after. Has not had any fits since. He is a well marked case of bi-lateral hemiplegia. He cannot stand without support, and is the subject of extreme general bi-lateral ataxia; the muscles of the arms and legs being thrown into violent choreiform or athetoid movements on the commencement of voluntary effort or during excitement. He can, to a great extent, control these movements by a strong effort of the will. The muscles of the face, mouth, and tongue show these inco-ordinate movements when he articulates. His head circumference is 21¾ inches. The shape of the head is mesaticephalic with a cephalic index of 76.3. The palate is normal in height, with good dental curve. Teeth sound and regular.

His mental capacity is good. He must be classed as a

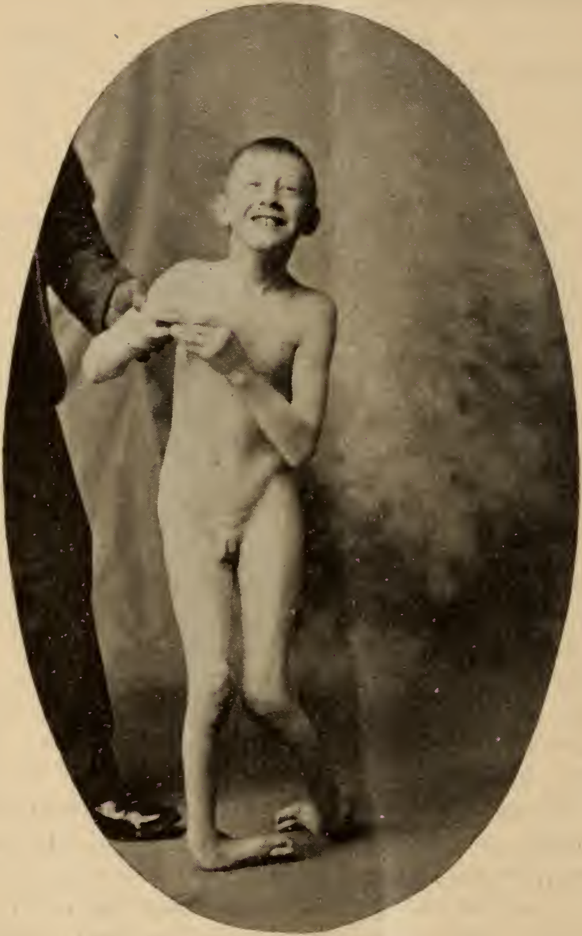

Fig. III. Paraplegic Imbecile.

high-grade imbecile or in fact as "backward" youth. He can articulate, but imperfectly owing to the spasm. He can read and write, and can work all the compound rules of arithmetic, including proportion and practice.

In writing he has to hold the pen in the left hand, and the paper has to be fixed down for him, as the right hand is very helpless. He can also do basket-work slowly. He has an excellent memory.

He is well developed and healthy, and the muscles of the limbs are strong and show no wasting. There are no permanent contractures, but the temporary spasm throws the limbs and extremities into distorted positions. As shown in the photograph, the feet are in a temporary posture of talipes equino-varus, and the knees are in a position of clasp-knife rigidity, owing to adductive spasm. The hands have only been steadied by clasping the knees. The whole attitude is one of spasm of a choreiform type controlled by a strong effort of the will.

Fig. 3 (from photograph). Case illustrating the paraplegic type.

E. F., aged 12, second-born child. There are three other children, normal in physical and mental condition. The parents were healthy, intelligent and temperate. The patient was born at full time. The labor was a protracted one, but no instruments were used. The boy had talipes when born. He was not asphyxiated at birth, nor was he convulsed soon after; he has never had any epileptic fits, but there is a history of teething fits at two years of age. The patient is a low-grade imbecile. Speech is absent, but he understands what is said to him. The circumference of his head is 19 inches; the cephalic index is 78.8 (mesaticephalic). The palate is high, but with good dental curve. Teeth sound and regular. He has slight internal strabismus.

The feet are now in the position of extreme talipes equino-varus, the soles looking backwards and upwards. He cannot stand without support, and progression is performed more or less on his knees. There is adductor spasm of the legs, with clasp-knife rigidity. The contractures of the legs and feet are permanent. The calf and leg muscles are somewhat wasted. Knee-jerk increased. No ankle clonus. The hands and arms are well developed and strong and in full use.

EDITORIAL COMMENTS

The Recent Health Congress at Madrid—The Section on "Pediatrics"

Considering the difficulties with which its organizers had to contend, the Hygiene Congress, just held in Madrid, appears to have been a pronounced success. Notwithstanding the fact that all Spain and especially Madrid was seething with political excitement, consequent on the receipt of President McKinley's message, the work of the Congress seems to have gone on quite smoothly and to have given great satisfaction. One of the most interesting and best attended sections was that treating of infancy and school life. The question of the education of children at school was fully discussed. Senor Augustin Sarda, Councillor to the Public Instruction Board of Spain, urged that children should not be permitted to read books at all until they were eleven or twelve years of age. He held that this was necessary for sanitary reasons, as a child under that age should not work longer than six hours daily, and therefore should have no home work. On the other hand, while the child was at school the time should be employed in listening to his instructor rather than in reading books. The discussion aroused by this harmless commencement quickly developed into a storm of criticism on the whole present day system of education, and one speaker did not hesitate to assert that the methods of teaching now in vogue only resulted in producing criminals. After the excitement evoked by this remark had subsided, the subject of school colonies was introduced and resolutions were passed: "Considering that holiday colonies have been established in many countries for more than twenty years, by which children from the elementary schools were taken from large towns into country districts during the holidays and thus removed from the contaminating influence of the streets; that among pupils of from ten to twelve years of age the benefits resulting are recognized by the most eminent authorities; that these benefits comprise a greater increase in size, chest measurement, and weight gained during three weeks of country life than during six months of town life; that such a marked improvement constitutes a very valuable means of conferring vigorous health to the child as well as improving him mentally; that the habits of discipline, cleanliness, self-control, are acquired in these colonies. . . . that the cost of such colonies has never exceeded sixty cents per day per pupil, and that for a little over $15 a pupil may be sent to a school colony for three weeks. For these and many other reasons the sixth section of the Congress of Hygiene expresses its desire that municipalities, school funds, cantonal delegations, should take in hand the establishment of school colonies.

Paper on Sterilized Milk and Infant Mortality Read at the Health Congress at Madrid

Another subject that excited much attention in the section devoted to "Pediatrics" was that of sterilized milk, and although in this country the literature in regard to it, has within the last few years perhaps been over voluminous, the paper contributed by M. Cleinent Geny and read before the Congress was so carefully prepared and the statistics gathered so convincing that it is worthy of quotation. M. Geny, who is administrator of the school funds, the crêches, and the school colonies of the First Arrondissement, of Paris, said that, "the number of children aged under one year dying in Paris amounted to 10,000 in 1886; and that in spite of the increase in population to only 7,665 in 1895. The average for the seven first years in this period was 8,850, that for the last three years 7,573, which is equal to a gain of 14.4 per cent., and this would be higher still if the increase of population were taken into account. In 1886 of the children under one year of age 3,645 died per 1,000; in 1895 the proportion per 1,000 was 254.2. The reduction in the death rate is especially marked in respect to diseases of the digestive organs and with regard to zymotic diseases. The number of children who have died from syphilis has also greatly decreased, the annual average of deaths from the latter disease being 232 up to 1892, and only 143.5 since that date. M. Geny considers that the more general practice of sterilizing the milk given to infants has been the most important factor in bringing about this result. Before the year 1893 this was only done to a small extent; but at that time the general public began to appreciate the use of these precautions. M. Geny also showed that the majority of infants who succumb to complaints of the digestive organs are those who are fed from the bottle, but that the rate of infantile mortality from this cause has been greatly lowered by abolishing tubes or introducing better bottles and sterilized milk. He therefore was of the opinion that the great saving of infant life in Paris since 1893 is due (1), To the hygienic measures taken by the city of Paris to prevent the spread of infectious diseases, notifications, disinfections, etc.; (2), to the treatment of diphtheria by the anti-toxin serum of Behring and Roux, and (3), to the more general use of sterilized milk and improved feeding bottles.

Influence of the Thyroid Treatment Transmitted from Mother to Child in Milk.

The beneficial effect of the thyroid treatment in the sporadic cretinism of children has now for some time been more or less generally recognized. The contention is not made that the injection of the thymus gland is by any means a certain curative remedy, but it has been proved beyond doubt that in many cases at least the treatment has been followed by decided improvement in the general condition of the patient. An interesting discovery has recently been made accidentally by a French physician in connection with the use of thyroid extract. The *Lancet* announces that at the meeting of the Academy of Medicine in Paris, held on April 12, M. Mossa read an account of a woman, aged twenty-nine years, who was subject of a goitre accompanied with feeble mindedness, but without symptoms of myxedema. Her general health was good. Her child, who was three months old and breast-fed, had a large biloped goitre, was very puny and sickly, but had no signs of myxedema. The mother was put upon thyroid treatment and took daily a quantity of thyroid extract, corresponding to 1½ grammes (23 grains) of thyroid gland. At the expiration of one and a half months the mother's goitre had diminished in size, but a still more marked result was obvious in the child, whose general health was excellent. After the lapse of a slightly shorter period of treatment, the goitre in the infant had completely disappeared and it was making good progress, while the goitre in the mother continued to decrease.

The Teaching of Pediatrics in our Schools

Thorough instruction in "Pediatrics" is still lacking in many of the medical schools, including some of the more important in this country. Although it is true that in this respect the United States compares favorably with and perhaps takes the lead of any of the European countries, there is still room for further advance. When the fact is considered that the diseases and complaints of childhood undoubtedly form the greater part of the work of the ordinary general practitioner, it is somewhat curious to note the want of interest exhibited in the matter by the teachers in the majority of the medical colleges. "Pediatrics" requires special study, insomuch as some diseases only attack children while others differ widely in their manifestations from the same diseases when occurring in adult life. In this journal it has been frequently and earnestly urged that the possession of an accurate knowledge of the diseases of early life is a paramount necessity, and that without this knowledge a medical man is imperfectly equipped for his duties. Dr. Chapin has once again called attention to the neglect of adequate instruction in this essential branch of medical training in a recent number of the *Medical Record* and states from his own experience as an examiner for hospital appointments, the woeful ignorance of candidates for these positions. Dr. Chapin remarks he recently examined thirty-five men upon "diseases of children," who came from the colleges situated in various parts of the country. The majority, however, had just passed out of the large colleges of Boston, New York, and Philadelphia. They were bright-looking, apparently well posted in general medicine, and appeared to be above the average output of these colleges. Upon "Pediatrics" they all stumbled badly. Dr. Chapin goes on to say: "This abundant ignorance on the part of graduates will continue until the colleges give proper attention to "Pediatrics." In the days when the time necessary to gain a diploma was but two years it might be justly contended that in so limited a period it was virtually impossible to give any special subject more than a perfunctory notice; now, however, that the course is four years, the situation has undergone a complete change, and to a proper study of "Pediatrics" a fair portion of that time should surely be devoted.

BOOK REVIEW.

Therapeutics of Infancy and Childhood.—By A. Jacobi, M.D., Clinical Professor of the diseases of children in the College of Physicians and Surgeons (Columbia University), New York; late President of the Association of American Physicians; of the New York Academy of Medicine; of the Medical Societies of the County and of the State of New York, etc. Foreign member of the Medical Society of Würzburg; of the Obstetrical Society of Berlin; of the Association for Internal Medicine of Berlin; of the Royal Medical Society of Buda Pesth, etc. Second edition. Philadelphia: J. B. Lippincott Company. 1898.

This book is a carefully revised edition of the work published by Dr. Jacobi in 1896, and is in its new form a thoroughly comprehensive and terse exposition of the author's views on the therapeutics of childhood. Taking into consideration the fact that the former edition, or at least a portion of it, was written so long ago as 1888, and since that time very rapid progress of knowledge in pediatrics has been made, there can be no doubt but that a certain amount of revision was necessary. The result is an altogether up-to-date book.

To Dr. Jacobi more than to any other man in this country and probably in the world is due the credit of introducing the subject of pediatrics as a separate branch, and of impressing upon the minds of the medical profession the need of special and intelligent study of the diseases of early life. Therefore his name attached to any book will be regarded as a guarantee of its worth. Dr. Jacobi quotes as the motto for his book Gerhardt's saying, "Erst untersuchen, dann urtheilen, dann helfen,"—First examine, then form an opinion, then treat. It has been pointed out more than once that we possess many books of clinical observations of great value—some which form from such works a chain of reasoning but very few which express the therapeutic conclusions of a life and wide experience. Consequently Dr. Jacobi's book will go far toward supplying this void. The first chapter is devoted to the question of feeding the sick children, and great stress is laid upon the necessity of giving children plenty of water. The second chapter deals with general therapeutics, and one, when reading it, will be chiefly struck with Dr. Jacobi's strong belief in the efficacy of drugs.

At the present time when it is the custom to sneer at the use of internal medicine, it is somewhat refreshing to meet with a physician of Dr. Jacobi's reputation, who not only holds these conservative opinions, but also has the courage to express them. In regard to the coal-tar preparations for reducing temperature, the author says: "Antipyrin, acetanilid, phenacetin, etc., will all reduce temperatures and have their occasional indications, but are known to depress, one more the other less, the action of the nervous system, and the functions of the heart, and even to destroy blood-corpuscles. Their administration requires the utmost care, and frequently the combination with stimulants to guard against detrimental effects." This warning in view of the very large use now made of these preparations should be borne in mind. Chapter three contains an interesting account of the treatment of the newly born, while the fourth chapter has for its subject the diseases of the blood and constitution. Perhaps, however, the pages relating to tuberculosis will attract the most attention; they comprise the most masterly treatise on the tubercular phthisis of children probably ever penned. Here again Dr. Jacobi states his predilection for drugs, and says: "I look upon arsenic as a powerful remedy in phthisis. . . . Arsenic is certainly a powerful remedy. . . . By fortifying the cellular and all tissues, both fibers and cells, it enables them to resist the attack of invasions, both chemical and parasitic, or to encyst, or eliminate such enemies as have penetrated them already. Thus it finds its principal indication in the peculiar fragility of the blood-vessel walls resulting in pulmonary hemorrhage."

The description of the different kinds of digestive disorders is ably compiled, and may be taken as a reliable guide by practitioner and student; in fact, the book from its first page to its last is, from a medical point of view, a model of what such a work should be. The language from beginning to end is pithy, well pointed English, over-elaboration is scrupulously avoided, and the author has completely succeeded in his endeavors to express his meaning clearly in as few words as possible. We are of the opinion that this volume will take its place as the standard work on the therapeutics of infancy and childhood.

PRACTICAL NOTES

Diagnosis of Tuberculous Peritonitis.—Hegar recommends an examination by vagina or rectum. We may frequently feel on the posterior surface of the uterus, in Douglas' cul-de-sac, at the sacro-iliac articulation, along Douglas' fold, and in the paravaginal tissue, small, often multiple nodules the size of a hemp-seed, a pea, bean, or even larger. These nodules are frequently moveable on their base, and are either attached to the peritoneum or imbedded in the connective tissue, in which case they represent enlarged lymphatic glands. —*Deutsch Medic. Wochenschr.*

Chlorosis.—According to Tschernoff, chlorosis in children is caused by various conditions. In the first instance disturbances of the digestive tract should be considered; after this, anatomical or functional lesions of the liver, the spleen, and the kidneys; nervous irritability or over-excitability also play a rôle in the occurrence of chlorosis.—*Jahr. j. Kinderheilke.*

Artificial Baths.—Stifler arrives at the conclusion that artificial baths can only take the place of natural curative baths in a very small proportion of cases. The technical, economical, and hygienic obstacles, as a rule, only render them useful in emergency cases. In conducting a scientific treatment, artificial baths are not to be employed.

The Statistics of Diphtheria in the Paris Hospital for Children during the year of 1896 were reported by Sevestre. These statistics include all cases suffering from or exciting suspicion of diphtheria, which were admitted to the diphtheria pavilion of Trousseau's Hospital during the year 1896, a great number of which were not true diphtheria, as was demonstrated in the course of a few days by bacteriological examination and clinical observation. The mortality figures include all those children who died either from diphtheria, broncho-pneumonia, measles, scarlatina, whooping cough, or tuberculosis. Eight hundred and thirty-three children were admitted, of whom

147 died; of these 99 died within the first twenty-four hours. This yields a total mortality of 17.24 per cent., and a reduced mortality of 12.29 per cent. These include those forms of angina which were later found to be non-diphtheritic. One hundred and forty children, of whom 26 = 18.56 per cent. died. The number of croup cases was 388, 145 of which were not operated on and 14 = 9.65 per cent. died. Out of 218 intubated cases, 71 died = 32.56 per cent. mortality. The other 25 cases were tracheomatized; of these 71 = 68 per cent. died.—*La Med. Mod.*

Hepatic Cirrhosis of Childhood.—Intercurrent typhoid fever; death from acute yellow atrophy (POWELL). An acute yellow atrophy of the liver, the cause of which could not be determined, developed in a six-year-old child, during the course of a hepatic cirrhosis. An intercurrent typhoid fever undoubtedly was an essential factor in the production of the former.

The atrophy of the previously enlarged liver was determined ten days before the appearance of icterus and thirty-seven days before death.—*Boltenstern* (*Bremen*).

Peronin, according to EBERSON, is a good substitute for morphine, as it never produces symptoms of intoxication. Children may take as many milligrammes (1/66 grain) as their age numbers in years. To disguise the bitter taste it may be given in syrup, in powder, or in tablets, the latter may be enclosed in wafers.—*Ther. Monatsh.*

Asphyxia of the New-Born.—AUDIBERT reports extraordinary good results in asphyxia of the new-born, from the hypodermic injections of ether in addition to artificial respiration.—*La Sem. Med.*

Antitoxin.—BERLIN reports from the Strassburg Children's Clinic that treatment by antitoxin had exerted a very favorable influence on the mortality of children suffering with diphtheria. No serious effects of the serum could be noted. Its influence on the kidneys was not bad. On the other hand he believes that since the introduction of antitoxin, post diphtheritic forms of paralysis and relapses had occurred more frequently than previously.—*Munch. Med. Wochenschr.*

Convulsions accompanied by stupor caused by adhesions of the foreskin to the glans penis were observed by Darey in three children otherwise healthy, ranging in age from ten months to two years. In every case the symptoms promptly disappeared on removal of these adhesions.—*Med. News.*

Syphilis.—An interesting case of extragenital infection with syphilis is mentioned by Speranski. The case was that of an infant at the breast and its mother. The latter presented a sclerotic spot on each nipple, while the child showed one on the upper lip. The history was that the child acquired the affection in the first instance and then transmitted it to the mother, at the same time it was, however, discovered that the mother had at one time nursed a strange child. He explains the case in the following manner, namely, that the mother was infected by the strange child, inoculated her own child with the syphilitic poison and was then later on locally infected by the latter.—*Monatsh. f. pract. Demat.*

A Case of Injury to the Heart by a Needle is reported by Morgan (Children's Hospital in Brighton). A boy five years of age in falling drove a needle, 1½ inches long, into his heart. This was imbedded for ¾ of an inch inclining toward the inner side and directed downward from the left nipple in a direction backward, outward, downward, and moved syncronously with the cardiac impulse in a vertical direction; during inspiration its external end was also lifted on a level with the nipple, again sinking downward during expiration. This injury was not at once followed by any dangerous symptoms whatever, but as soon as the needle had been extracted the patient collapsed. The collapse was overcome, however, by the use of stimulants and the child made a perfect recovery.—*The Edinb. Med. Jour.*

ABSTRACTS

THE TREATMENT OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

Bela Angyan (*Memorabilien, 1898, xli. 235*). In the absence of any specific medicine, we must confine our treatment to the suppression of symptoms. Leeches allay the headache and the symptoms of irritation; venesection is recommended by the author only in hyperacute cases, and then only in robust patients and during the first stage of the disease. A cold bath is not well borne by these patients. They are liable to collapse. A douche of cold water for a few minutes every three to four hours over the head and nape of the neck is recommended as very beneficial, especially in attacks of coma. Prolonged ice applications exert a prodigious antiphlogistic effect; he uses the ice bag on the head and nape of the neck, also Chapman's tubes to the spine, but only so long as the patient feels comfortable under its application, Its effect is seen in the cessation of pain and symptoms of excitement, and frequently quiet sleep results. Treatment by mercury, which was practiced on the recommendation of French physicians long ago in the form of calomel and inunctions, still retains a prominent position in the treatment of epidemic cerebro-spinal meningitis. As regards symptomatic treatment, it may be said that he employs opiates in cases of the most violent excitement, in obstinate vomiting, and in intractable insomnia. They are contraindicated in conditions of depression, in cases of somnolence or when collapse is to be feared. The use of excitants and analeptics is confined to a narrow field, generally to cases in which narcotics are contraindicated.

As the brain and spinal cord are subjected to great pressure by the accumulation of cerebro-spinal fluid in epidemic cerebro-spinal meningitis. Quincke's theory that by the removal of a portion of the cerebro-spinal fluid, the brain as well as the spinal cord are released from pressure, and that the course of the disease is thus favorably influenced, seems justified. The experiments on these lines by Ziemssen, Leyden, Kétly, Fürbringer, and others were by no means favorable to the therapeutic demands, and to Quincke's hypothesis.

Aufrecht during recent years recommended warm baths. Their favorable influence on the heart is much lauded, and the most favorable results are reported in epidemic cerebro-spinal meningitis. The author confines his treatment to the application of ice bags and the subcutaneous injections of a corrosive sublimate solution. The sublimate makes its way at once into the blood-current, where its action is more rapidly and more energetically obtained, and attacks the germ of infection in the rôle of an antimycotic remedy.

In this manner he treated six cases in 1895, twenty cases in 1896, and one case in 1897—in all twenty-seven patients. Of these, nineteen or 70.30 per cent. recovered. The cases belonged to the acute and subacute variety, ranging in age from three to thirty years. Six were females and twenty-one males. The number of injections made in the patients who recovered varied between four and twenty-four. The patients, as a rule, bear the injections very well. In one case slight salivation occurred after the fourteenth injection.

The following were the symptoms which occurred after the injection of corrosive sublimate:

1. As a rule the mind of the patient cleared up after the second or third injection, the symptoms of irritation were milder, headache improved, and the patient was able to sleep.
2. After the fifth to sixth injection consciousness usually returned and sleep became quieter and longer.
3. After seven, eight, and nine injections, the stiffness of the neck improved or even disappeared. Fever became less or ceased altogether.
4. Corrosive sublimate did not seem to prolong or shorten the course of the disease.
5. Corrosive sublimate seemed to check, after a few days, the formation of inflammatory products. This was seen in those cases in which a post-mortem disclosed only few products of inflammation, and these products were of a fibrinous rather than a purulent character.

A NEW STERILIZING APPARATUS FOR INFANT FEEDING.

Vornhecke (*Centralbl f. Kinderheilk*, *1898*, *iii. 48; Zeitschr*, *f. Kvankenpflege*, *acrztl. Polytchn*, *1897*, *12*). Infant feeding, according to Soxhlet's method, although possessing great advantages, also has great disadvantages. One of these, and a most important objection, is that the children frequently become anemic and show a tendency to rhachitis. Two and a half years ago the author began to use a simple stopper of cotton in place of Soxhlet's air-tight rubber stopper, and thereby obtained more favorable results. The cotton plug allows the free entrance of air, so that the sterilized milk, after cooling, is again saturated with atmospheric air. The charging of the milk with air, be it ever so little, seems to be of great importance for its easy digestion. The reason of this cannot be explained, but the fact has been demonstrated. It frequently happened, even, that weakly infants, who did not thrive under the Soxhlet method, at once began to pick up in a remarkable manner when the cotton plug was used. It was found that placing the cotton in the bottles was combined with annoyances; the cotton was soiled by the boiling milk and became adherent, its fibres were hard to remove, contaminated the milk, etc. This inconvenience was easily overcome by placing the cotton in a small cup or ball-shaped vessel of glass or metal, which ends below in a small tube, and is fastened air-tight in the neck of the bottle by means of a screw cap instead of directly pushing it into the neck of the bottle, so that the air passing in and out is obliged to pass through the cotton into the bottle, and is thus rendered free from germs. We must, of course take care that the bottles are not filled too full, as in this case the milk may be forced into the small tube during boiling. A bottle which answers all these requirements has been constructed by the author. It does not cost more than the common bottle, although it is annealed more thoroughly and made stronger; sterilization of it is best carried out in steam vapor. The advantages of this new method are:

1, The milk is better retained; 2, its taste is better, and the odor of rubber is done away with; 3, sterilization can be carried out easier and more rapidly; 4, cheapness; 5, simple management; 6, great durability of the closing apparatus.

SYMPTOMS OF POISONING FROM THE USE OF MALE FERN.

Zabel (*Berl. klin. Wochenschr. 1897, xxxiv. 995*). The following case teaches us how even small doses of extract of felix mas may occasion grave conditions of intoxication: A boy, five years of age, somewhat frail, very anemic but otherwise bright, was ordered a remedy for tapeworm by a physician. On the day before taking the medicine he was not to eat anything,and on the following day he was to receive some herring and a cup o black coffee. One hour and a half later he was to take the following electuary:

℞ Extr. filicis maris æth............... 0.8 (12 minims)
Mel. depur......................... 8.0 (2 drams)

in two portions, and then 15 grammes (half ounce) of castor oil. After a period of five hours the patient went into a comatose condition; respiration was accelerated; the pulse rose to 160 to the minute, and complete apathy developed, finally complicated by violent vomiting.

In this condition he first saw the patient. Coffee, lemonade, and ice pellets were not sufficient to control the vomiting. Besides this, an infusion of valerian root and hydrochloric acid with pepsin was ordered, an ice bag applied to the head, and a clysma. The patient remained in this comatose condition for four days. The temperature always remained normal. Patient was kept alive by rectal feeding. On the fifth day he received a bath of 30° C. Soon after this copious perspirations occurred, and gradual improvement began. On the seventh day the mind became clear.

The author believes a preliminary course of preparation for worm medicines to be unnecessary and dangerous. The action of the male fern is a purely local one; absorption of the remedy is not looked for; fasting only weakens the body and assists the action of the remedy on the brain. It will be sufficient to put the patient on a sparse diet on the day previous to the administration of the remedy to obtain its good effect. In badly nourished and nervous children it may be safer to avoid this remedy altogether.

ON THE NATURE OF RICKETS.

CHAUMIER (*Centralb. f. Kinderheilk, 1897, ii., 358*) from his studies, is of the opinion that rickets is an infectious disease, which may be contagious. This opinion is based on the frequent presence of rickets in institutions for children and also on the fact that in case a child suffers from rickets in a house occupied by other tenants the rickets will also make its appearance in other children. He further observed that wet-nurses, whose own children were rickety, communicated the disease to the children they nursed. Casati has mentioned that he knows of families whose children born in certain houses were rickety, but those raised in another house remained free from the disease. The author became aware of epidemics among young pigs, in whose bones he later found the characteristics of rickets. He arrives at the following conclusions:

1. Rickets is a specific disease, caused by unknown microbes.
2 It is contagious, endemic in cities, and occasionally epidemic.
3. It is found in an epidemic form in young pigs, and its germs are preserved in houses.

THE PATHOLOGIC IMPULSE TO DRINK.

WILLIAM LEE HOWARD, M.D., in a series of articles on The Pathologic Impulse to Drink—Alcohol as a Secondary Factor in Dipsomania, *Medicine*, February, March, 1898, says that dipsomania is a symptom of defective inhibition. Defective Inhibition may show itself in multitudinous form of impulsive acts, from slight exhibitions of temper to atrocious crimes. Some cases of dipsomania can be traced to the absence of early education in not correcting uncontrollable impulses in early childhood; but even here we will invariably find the child has inherited a richly neurotic soil, demonstrated by uncontrollable impulsive acts. In some cases there seems to be an interruption of development in certain centers, as is demonstrated by these impulsive acts of childhood. This condition must be understood when training or correcting the child.

The victim of dipsomania, like the sexual pervert, is one generally born of ancestors whose central nervous systems have been on an exhaustive strain throughout life. Many men in this country in the last decade have not married until they have rushed through the best portion of their life in the hurry, push, and excitement of an early professional or business career. They bequeath to their progeny the dregs of a former vital and equilibriated cell protoplasm, and the result is an unstable nervous mechanism which the heir is unable to adjust. In these cases the laws of heredity prevails, but between the laws which are to act and the indefinite variety of forces and circumstances upon which those laws may operate in a vast stretch of uncertainty.

There is another large class of dipsomaniacs whose history shows the early disturbance of the cortical cells during their developmental periods. These are the cases which in infancy have been given by "the old nurse" alcohol in some form. If one carefully investigates, he will be surprised to learn what a large number of individuals were early quieted by doses of brandy and gin. I am not referring to the low, ignorant class among whom this habit is not unusual, but of a class which consent and courtesy calls intellectual.

It is evident from what has been said about the uncontrollable impulses of childhood, that the prevention of these analogous attacks in adults is in the early training of the child, and a thorough understanding of the heredity of the child. When physicians and parents fully realize the meaning and ultimate disastrous results of the passionate, paroxysmal and violent outbreaks, a *veritable faire le diable a quatre*, then will many an individual bless the day that he was compelled to control the outbreaks, and by such training throughout the developmental stage reach manhood with a nervous system worknig in harmony the balance of his life, and able to adjust itself to the various circumstances and rhythms as they occur.

If we have cells controlling inhibition they are dormant in the cases where the child shows uncontrollable impulses. Education cannot cause any fundamental changes in these cells, but it can vastly strengthen them. In all functional activities a tendency to the formation of habit occurs, and it makes all the difference between happiness and sorrow when by habit we rouse these dormant cells into constant activity.

A BIVALVE PLASTIC SPLINT FOR POTT'S DISEASE.

HENRY LING TAYLOR read this paper before the American Orthopedic Society at its meeting in Boston, May, 1898. The advantages and disadvantages of the treatment by plastic splints were pointed out, and modifications suggested by which the latter may be minimized.

It was maintained that the plaster jacket is a leverage apparatus, acting essentially like an antero-posterior steel support, and it is urged that similar principles be followed in its construction and application.

The ordinary jacket, made long in front and solid at the edges, is provided with strips of felting, either side of the spinous processes behind and across the inside of the front at the top and bottom.

While still fresh the jacket is cut in the axillary line by two straight incisions into an anterior and posterior half, whose breadth is somewhat diminished by paring away the sides. The bivalve splint is then trimmed and provided with at least four straps and buckles on each side, or one side may be fastened by a leather hinge. The head-rest, when needed, should consist of a chin-piece supported by one or two bent steel bars incorporated in the anterior part of the splint. Advantages claimed are cleanliness, avoidance of excoriations, adjustability, and precision. Finally, the terms "jacket" and "head-spring" are criticised as inaccurate and misleading; the terms "splint" or "brace" and "head-support" being preferred.

GROWTH IN SPONDYLITIS.

Henry Ling Taylor (American Orthopedic Society, May, 1898) said that a striking result of Pott's disease was its dwarfing effect. Growth in height is diminished by loss of substance, deformity, and malnutrition. The degree of retardation will depend in a given individual on the age of invasion, the location, amount, severity, and duration of the disease, and the hygienic and surgical management of the case. The ultimate result is usually a height (and weight) considerably below normal.

In early cases of average severity and duration, growth is much retarded up to the fourteenth year, from an inch and a quarter to an inch and a half being a fair rate, instead of the normal two inches and upward. A growth of one and a half to two inches, maintained for a considerable time indicates that the case is doing remarkably well; very slow or absent growth in stature indicates that the child is not doing well. Puberty and general physical development are also retarded, and if the disease has ceased to be active there may be a late acceleration of growth from the sixteenth to the eighteenth year and considerable gains may occur after the age of twenty. As the rate of increase in stature and weight afford valuable information in regard to the condition and progress and practical aid in the treatment of these cases, it is suggested that measurements of the standing and sitting heights (and weight) of spondylitis be recorded from two to four times yearly. Such measurements covering a series of years would be particularly useful in enabling us to judge of new methods of treatment, as, for example, the method of forcible reduction.

REMOVAL OF A PEBBLE FROM THE EXTERNAL AUDITORY MEATUS.

Dr. Jul. Boeke (*Ungar. Medic. Presse, 1898, iii., 114*). In general practice the methods usually employed to remove foreign bodies from the ear often result in pushing it deeper into the auditory canal, or rupturing the drum membrane and forcing it into the middle ear, This may give rise to suppuration and even a fatal meningitis.

The author reports the following case to illustrate his method: A pebble lodged in the left ear of a three-year-old boy; after repeated syringing failed to dislodge it; its extraction was unsuccessfully attempted under narcosis by means of the ear-spoon and pointed hook. Then an incision was made behind the pinna of the ear and parallel with it, and the cartilaginous external auditory canal was opened. The pebble was seen wedged tight at the bottom of the canal.

It was necessary to remove a few circular layers from the bony wall of the auditory canal to enable one to lift out the stone with the ear-spoon.

TREATMENT OF DIPHTHERIA WITH A TWO PER CENT. SOLUTION OF TINCTURE OF MYRRH.

Stroell (*Memorabilien, 1898, xli. 209*). Eighty cases treated with this drug are reported with only one death, a child two and a quarter years old, which was brought to the office suffering from extreme respiratory obstruction. The formula is as follows:

℞ Tinct. myrrh	4.0 (1 dram)
Glycerin	8.0 (2 drams)
Aquæ destill—ad	200.0 (6⅔ ounces)

Sig.—According to directions

This mixture should be administered day and night—every hour during the day and every two hours during the night. The dose for children under two years of age is one coffee spoonful (1⅓ drams); from two to fifteen years of age a childsspoonful (2⅔ drams), and in adults one tablespoonful (4 drams). As soon as marked improvement is noted the medicine may be given at longer intervals. When the exudate has totally disappeared the medicine should still be continued every three hours for forty-eight hours to guard against a relapse. The author claims that the membrane becomes loosened within forty-eight hours, and the fever and feeling of debility usually disappear in twenty-four hours, so that at the second visit the patient is usually found playing in bed.

All local treatment may be dispensed with, though it cannot be denied that the diphtheritic process disappears more rapidly on the tonsils if local treatment is at the same time employed. For this reason he recommends a gargle to adults and older children which is to be used every half hour or hour during the day (during the night it is unnecessary). The gargle consists of two tablespoonsful of a ½ per cent. solution of resorcin.

℞ Resorcin	2.0 (½ dram)
Aquæ	400.0 (13 ounces)

Sig.—Use as a gargle.

In laryngeal diphtheria the same mixture is used by means of an inhalation apparatus or a hand spray every hour or half hour. If the tincture of myrrh is administered for a few days, the urine, on boiling, will present a turbid appearance, which is due to the resins in the myrrh. It can be distinguished from albumin by its solubility on the addition of alcohol. Stroell claims that nearly every case of diphtheria which has not yet spread to the larynx will be cured by the 2 per cent. solution of tincture of myrrh.

SUDDEN DEATH IN CHILDREN.

Bertholl (*Arch. f. Kinderheilkunde, 1898, xxiv. 186*). Sudden death of apparently healthy children is, in the great majority of cases, due to a swelling or hyperplasia of the thymus gland. Grawitz reported two cases of previously healthy children, aged respectively six months and eight months, in which the only pathologico-anatomical finding at the post-mortem was an enlargement of the thymus gland. This gland had caused sudden death by asphyxia through pressure on the trachea and the bronchi. The thymus gland is subject to many pathological changes which are characterized by inflammation or hyperemia and swelling, by hemorrhages, by tuberculosis, and by suppuration. Furthermore, malignant changes, as carcinoma and sarcoma, are observed in this gland, and the main symptom in all these diseases is probably that of dyspnea, caused by compression of the trachea and the larger bronchi.

Of great interest in the cases of sudden death due to the thymus gland are the simple, genuine hypertrophies; it is a condition which, in the greater number of cases, runs a latent course, and usually attacks healthy and robust children. The clinical course of this hypertrophy is often a short one; in its issue, tragic. A seemingly healthy child, unusually robust and only a few months old, according to the statement of Grawitz, is nestling in the arms of its father, who plays and jokes with it. Suddenly the child was attacked by fearful dyspnea, the face takes on a dark purple hue, the eye-balls roll upward, the hands are convulsively closed, and, without uttering a sound, the child falls back dead. This picture was drawn by Grawitz of a case under his personal observation. The autopsy did not reveal any anatomical abnormality except a greatly enlarged thymus gland.

Besides the sudden death, due to an acute hypertrophy of the thymus gland, which cannot be previously diagnosticated, we meet with hypertrophied thymus glands, which can be made out with some certainty during life. A case in point:

In Biedert's Hospital, a ten months' old boy was suffering from stenotic respiration. The voice was clear, and diphtheria bacilli were absent. Dyspnea increased so that within four hours intubation was done, but it gave no relief. Cyanosis increased; tracheotomy was performed, also without relief, and death was unavoidable. Biedert diagnosticated during life from the great dullness elicited above the sternum and its forward bulging, an hypertrophy of the thymus. This diagnosis was shown at the autopsy to be correct. The gland was 7½ cm. long, 7 cm. broad, 1½ cm. thick, and 21.6 grammes (5½ drams) in weight.

In spite of the positive proofs which Grawitz obtained at his autopsies that death by asphyxia is caused in some children by the hypertrophied thymus gland, there soon appeared opponents of his view, who tried to prove that Grawitz was wrong. They claimed that in children who died suddenly under similar circumstances the hypertrophy of the thymus as described by Grawitz could not be demonstrated.

The explanation is that these cases were simply cases of laryngismus stridulus.

In recent times, Escherich, following Paltauf, made the observation that the status lymphaticus may also expose children to sudden death. Escherich diagnoses the status lymphaticus from the pale, fine, transparent skin, the richly developed subdermal fatty tissue, the enlargement of the lymphatic glands, particularly in the neck and the axillæ, the enlarged spleen and the enlarged thymus. In these cases, however, a sudden cardiac paralysis is the cause of death, and not the mechanical pressure of the thyroid gland on the trachea.

Another cause of sudden asphyxia in children has been pointed out by Bencke. He believes with Paltauf that sudden deaths by asphyxia in infants may also occur from sudden retraction of the child's head, in which position the trachea may, in unfavorable cases, become so markedly stenosed that no air whatever is able to enter the lungs. If the head in these cases is not at once flexed, death by asphyxia may follow. It is frequently the case in rhachitic children that some disproportion exists between the weight of the head and the muscular strength of the neck, and these children are not able to bring the head to its proper position by their own exertion. In these cases we find the trachea flattened so as to bring about a total closure of the tube.

In summing up, he said that (*a*) in spite of opposing views, the existence of an idiopathic hypertrophy of the thymus, which may bring about death in an infant, has been demonstrated.

b. A swollen thymus gland, in conjunction with rhachitis and the status lymphaticus may also play an important rôle in the sudden death of children during an attack of laryngismus stridulus has been proven.

c. Finally, an acute lordotic flexion of the neck may compress the trachea in such a manner that sudden death by asphyxia can take place. This has been demonstrated by post-mortem examinations.

INTUBATION OF THE LARYNX.

Bokay (*Arch. f. Kinderheilk*, *1898*, *xxiv.*, *26*) reports eight cases of intubation in syphilitic stenosis, in chronic subglottic stenosis, in difficult removal of the canula, in the presence of foreign bodies in the upper air passages, and to assist tracheotomy.

His cases were:

Two of cicatricial stenosis of the larynx.

Two of syphilitic stenosis of the trachea.

One of inflammation of the inferior vocal cord.

Two of difficult removal of the canula.

One of foreign-body (egg-shells) wedged in the larynx.

The author advocated intubation in this class of cases. Boulay

(Paris) discussed the subglottic stenosis, which occur in the course of intubation. These stenotic conditions are caused by:

1. The infiltration of the mucous membrane, which becomes chronic; it arises in spite of intubation, not through the intubation. It is met with just as often after tracheotomy as after intubation. The prognosis is not unfavorable. They are occasionally cured in one sitting by dilatation or by continued intubation.

2. The sequalæ of ulcerations, which are produced in the inflamed and swollen mucous membrane by the tube. These consist of cicatrical strictures, and must be treated very carefully and with great patience; slow dilatation is the main factor in its treatment.

Katz (Berlin) emphasised that difficult removal of the canula and extubations are at present frequently mentioned. They are partly caused by the hastened throwing off of the diphtheritic membrane in the larynx and trachea under the influence of serum treatment. As a result, the tube exerts earlier and stronger pressure on the naked mucous membrane (from which the deposit has been removed) and in this manner produces more easily the ulcerations of which Bokay speaks.

In grave laryngo-stenotic cases, due to inhaling gases derived from combustion, for example, smouldering wood, etc., intubation in conjunction with other treatment has given brilliant results.

The only danger is that in the end some damage may be done by unskillful intubation. Intubation is and will remain a difficult operation.

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